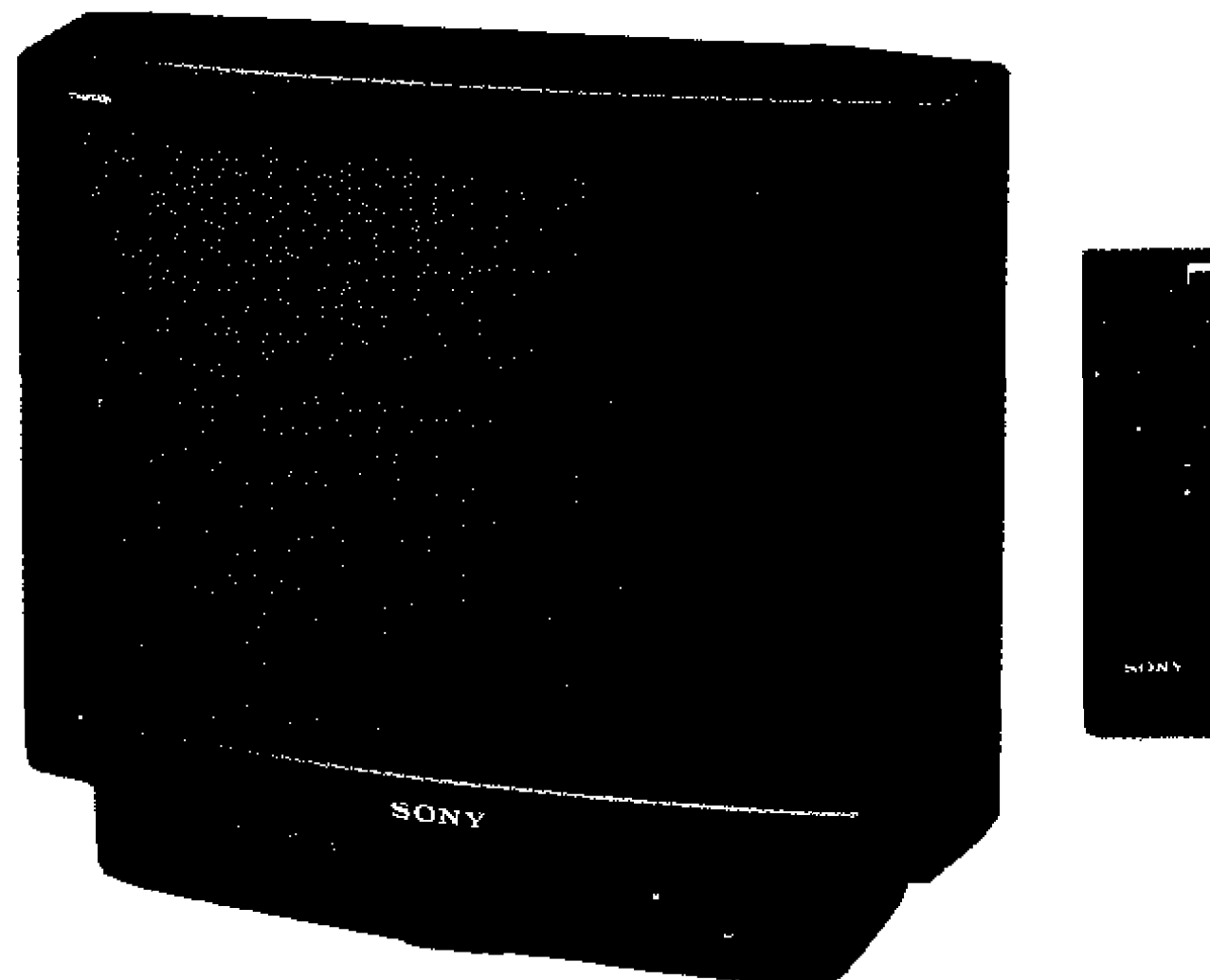


# KV-M1421D

## RM-694

## SERVICE MANUAL

*AEP Model*  
Chassis No. SCC-D85A-A



## BE-2A CHASSIS

### MODELS OF THE SAME SERIES

KV-M1421E	KV-M1920D/M1921D
KV-M1420A/B/E/U	KV-M2140D/M2141D
KV-M1620D	KV-M1420D

### SPECIFICATIONS

#### 【KV-M1421D】

Television system	B/G/H
Color system	PAL, SECAM
Channel coverage	VHF : E2-E12 ,S1-S20 UHF : E21-E69
Picture tube	Black Trinitron tube 90° degree deflection Approx. 36.8 cm (14 inches) (Approx. 33.7cm picture measured diagonally)
Inputs	21-pin connector : CENELEC standard Including RGB input Audio/Video input jacks : phono jacks
Outputs	21-pin connector : CENELEC standard Headphones jack : minijack
Sound output	5 W (Music)
Power consumption	53 Wh
Dimensions	Approx. 354x325x407.5 mm (w/h/d)
Weight	Approx. 10.5 kg

#### 【RM-694】

Remote control system	infrared control
Power requirements	3V dc 2 batteries IEC designation R6 (size AA)
Dimensions	Approx. 55×18×185mm (w/h/d)
Weight	Approx. 100g including batteries
Accessories supplied	IEC designation R6 batters (2)
Supplied accessories	RM-694 Remote Commander (1) IEC designation R6 batteries (2)

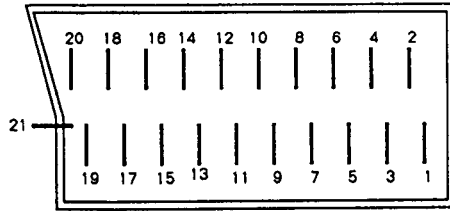
Design and specifications are subject to change without notice.



## TRINITRON® COLOR TV


# SONY®

**21-pin Euro Connector Configuration**



PIN	SIGNAL	SPECIFICATION
1	Audio output	0.5Vrms/1kilohm or less
2	Audio input	0.5Vrms/10kilohms or more
3	Audio output	0.5Vrms/1kilohm or less
4	Earth (audio)	
5	Earth (B-input)	
6	Audio input	0.5Vrms/10kilohms or more
7	B-input	0.7Vp-p/75ohms
8	Function switching	9.5V to 12V
9	Earth (G-input)	
10		
11	G-input	0.7Vp-p/75ohms
12		
13	Earth (R-input)	
14	Earth (blanking)	
15	R-input	0.7Vp-p/75ohms
16	Fast blanking	1V to 3V/75ohms
17	Earth (video)	
18	Earth (fast blanking)	
19	Video output	1Vp-p/75ohms
20	Video input	1Vp-p/75ohms
21	Screening plug	

**SAFETY-RELATED COMPONENT WARNING !!**

COMPONENTS IDENTIFIED BY SHADING AND MARK  ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

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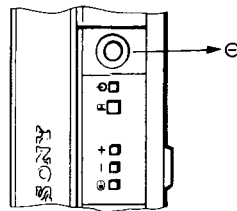
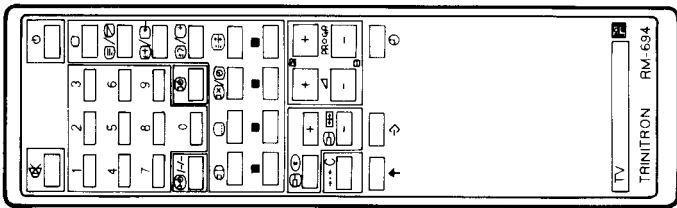
# SECTION 1 GENERAL

## 1-1. PRESETTING OF CHANNELS

After having installed the TV, you now need to preset TV channels. Up to 60 programme positions are at your disposal. For channel presetting use the buttons with the red symbols on the Remote Commander.

**Important:** In order to ensure presetting, you have to keep the **SHIFT** button pressed, while pressing the other buttons (that is **PROGR** + **+** or **PROGR** + **-**, **C**) during presetting.

Automatic Presetting of Channels	
Action	Result
<b>1</b> Turn on the TV using the power switch <b>ON</b> on the set.	
<b>2</b> Press both the <b>SHIFT</b> button and the <b>PRESET</b> button simultaneously.	You are now in the preset mode. The programme number flashes.
<b>3</b> Press either the number buttons or <b>PROGR</b> + <b>+</b> or <b>PROGR</b> + <b>-</b> to select the programme number on which you want to preset the channel. <b>Note:</b> In case of two digit numbers, first press <b>PROGR</b> + <b>-</b> or <b>PROGR</b> + <b>+</b> , then the two numbers.	The selected programme number will be indicated.
<b>4</b> Press both the <b>SHIFT</b> button and the <b>PROGR</b> + <b>+</b> or <b>PROGR</b> + <b>-</b> button repeatedly, until the desired channel is tuned in.	The scale with the frequency band changes.
<b>5</b> Repeat steps 3 and 4 for all other channels.	
<b>6</b> Press both the <b>SHIFT</b> button and the <b>PRESET</b> button simultaneously to store the channels.	All channels are now stored. The programme number stops flashing.



## How to skip programme positions

Since you have 60 programme positions at your disposal, you may want to skip vacant programme positions, that is that they are skipped when you press the **PROGR** + **+** or **PROGR** + **-** buttons.

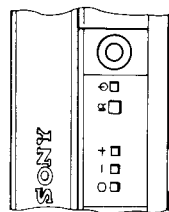
Action	Result
<b>1</b> Press both the <b>SHIFT</b> button and the <b>PRESET</b> button simultaneously.	You are now in the preset mode. The programme position flashes.
<b>2</b> Use either <b>PROGR</b> + or <b>PROGR</b> - to select the programme position you want to skip.	The selected programme position appears.
<b>3</b> Press both the <b>SHIFT</b> button and the button <b>C</b> simultaneously.	
<b>4</b> Press both the <b>SHIFT</b> button and the <b>PRESET</b> button simultaneously.	The programme position is now skipped. You are back in TV mode.

## How to fine tune a channel manually

If the reception of a stored channel is not satisfactory, you can fine tune the channel manually.

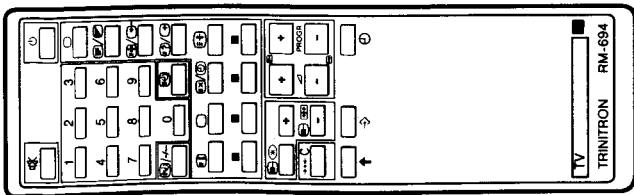
Action	Result
Press both the <b>SHIFT</b> button and the <b>PROGR</b> + or <b>PROGR</b> - button simultaneously until the reception is good.	The channel is fine tuned.

**Note:** By pressing the respective programme number the automatic fine tuning will be restored.



## 1-2. TV OPERATION

Your TV set is supposed to be operated with the Remote Commander. For the basic functions, however, it is also possible to use the buttons on the set.



How to switch the TV on and off	
Action	Result
<b>1</b> Press the power switch ① on the set.	The TV will turn on. <b>Note :</b> If the red indicator is on, the set is in standby mode.
<b>2</b> Press a number button on the Remote Commander, to select a programme.	The selected programme appears.
<b>In order to switch the set off temporarily :</b> Press button ① on the Remote Commander.	The set is in standby mode. Press button ① or any number button to switch it on again.
<b>In order to switch the set off temporarily :</b> Press the power switch ① on the set.	The set is switched off.

### Sleep Timer

Press the ② button repeatedly until the required time period is displayed on the screen (30, 60, 90 minutes or 0 for cancelling the request). In this way you can select the time period after which the set switches itself automatically into standby-mode.

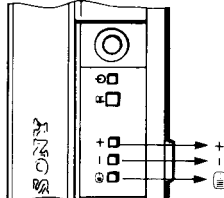
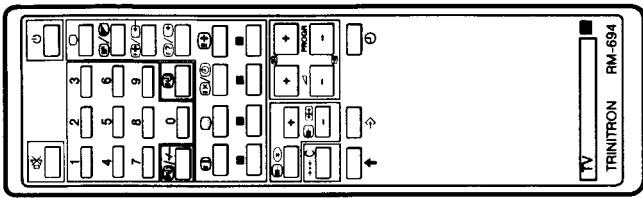
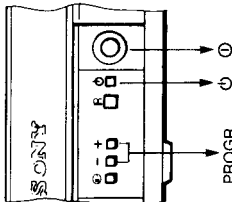
## How to select programmes

Before selecting programmes make sure that you have preset channels.

Action	Result
<b>1</b> Switch the TV on.	
<b>2</b> Press PROGR + / - or the respective number button on the Remote Commander. In case of two digit numbers first press the button - / - - and then the two respective number buttons.	The selected programme is displayed.

### On the set :

Press the - button for lower programme positions and the + button for higher ones.



## How to adjust the volume

Action	Result
Press ④ + or -.	The symbol and the bar for the volume are displayed on the screen. The volume is adjusted.

### On the set

Press ④, until the symbol ④ is displayed on the screen, then adjust the volume by pressing the + or - buttons.

### Muting of the sound :

Action	Result
Press button ⑤.	The sound is switched off. Press the button again to restore the sound.

## How to adjust the picture

Action	Result
<b>1</b> Press button ⑥ repeatedly, until the desired item is displayed ( ⑥ contrast, ⑦ colour intensity, ⑧ brightness).	The symbol and the respective bar display are displayed.
<b>2</b> Press button + or -.	The selected picture item is adjusted.

### On the set :

Press button ⑥ repeatedly in order to select the desired item, then adjust with the + or - button.

### To return to factory-set levels

Press the button → ←.

## Other functions

### On-screen display

Press the button ⑨ to display the programme number on the screen and press the button a second time to make it disappear.

### Selecting the signal of a connected device.

Press the button to receive the signal of the device (e.g. a VTR) connected at the V I A connectors (front of the set), the S-Video input or the 21-pin connector (rear of the set). Press the button ⑩ to return to the TV mode.

### On the set :

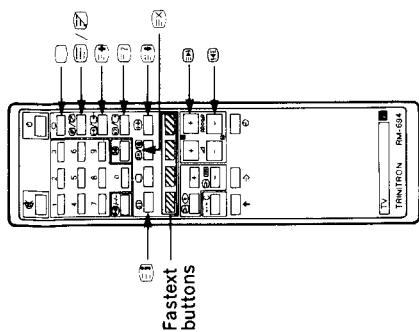
Press button ⑩ so that the symbols ⑩, ⑪, and ⑫ will be displayed. Press the + button to select the video input mode. Press ⑬ and + buttons a second time to return to the TV mode.

### Time function

Press ⑭ to display the time. Press button again to cancel the request (only if teletext is broadcast).

### 1-3. HOW TO VIEW TELETEXT

## Viewing Teletext



To view the teletext service, use the Remote Commander. The buttons for teletext operation are indicated in green.

Select the TV channel for the desired teletext service. If the signal is weak, teletext errors can occur.

**To receive the teletext service of a different TV channel**

1. Press **EXIT** to return to the TV mode.
2. Select the desired TV channel.
3. Press **TEXT/MIX**.

Press **7/08** (TEXT/MIX) to display the  
teletext service.

Key in three digits of the desired page using the number buttons. If an error is made, complete the three-digit sequence by keying in any digit. Then, re-enter the correct page number.

The requested teletext page is displayed.  
To return to TV mode press ☐ on the  
Remote Commander.

## Teletext Functions



**To request Index Page**

Press **⏮** (INDEX). If the necessary signal is not being broadcast, page 100 is displayed.

**To access the next or preceding page**

Press  
(PAGE+) or  
(PAGE-)

**To superimpose the teletext display on the picture (MIX)**

Press /  twice from the TV mode.  
Press again to return to the TEXT display.

To prevent the Teletext page from being updated/changed

Press **⏮** (HOLD). The HOLD symbol appears on the screen.

To resume normal teletext reception (press / (TEXT/MIX)).

**To enlarge the Teletext display**


Press **⏏** once to enlarge the upper half of the display; (press again to enlarge the lower half of the display. And press again to return to the normal display)

**To reveal concealed information such as answers to a quiz**

Press ( ) (REVEAL).

Press again to conceal the answers.

**To watch the TV programme while waiting for a requested page to be**

1. Request the new page.
2. Press  to watch the TV

programme. The requested pa

number and other data appear at the top of the screen. When the requested page has been captured, the page number displayed in the top left hand corner

To view this page, press  / 

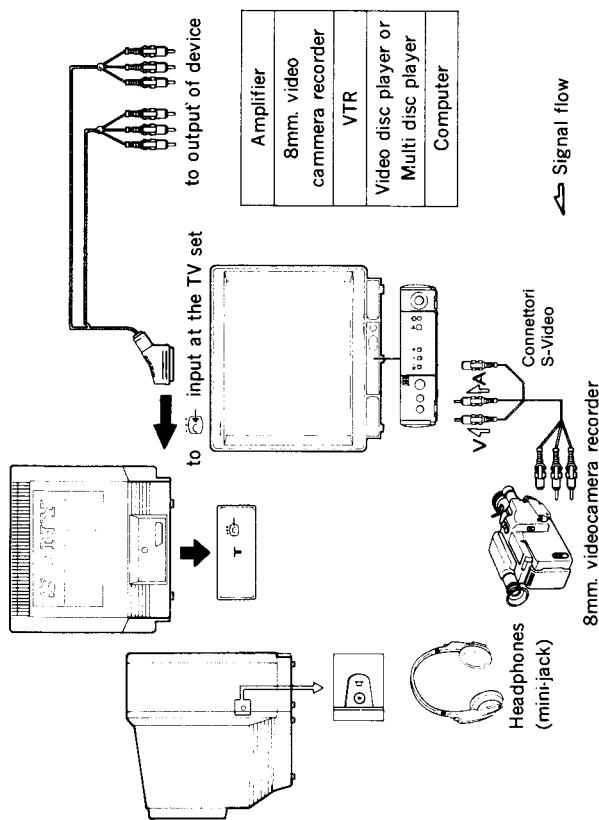
## Fasttext Operation

FASTEXT teletext enables you to access pages quickly and conveniently with one key operation. When a FASTEXT page is broadcast a colour coded menu will appear at the bottom of the screen. Each coloured prompt relates to the coloured keys on the Remote Commander. Pressing one of these will select the page described by the prompt.





Selection may also be made by entering the three digit page number in the normal way.

#### 11-4. OPTIONAL CONNECTIONS/OPERATION





## How to connect additional Audio/Video equipment



## How to view the Video input signal

Press button  repeatedly in order to select the desired input mode ( for Audio/video signals from the video/audio connectors  or from the video/audio connectors  on the front). Press button  to return to TV mode.

**On the set:**

Press button  until the symbols , , appear on the screen, then press the + or - buttons to select the desired video input mode. Press  again to return to TV-mode.

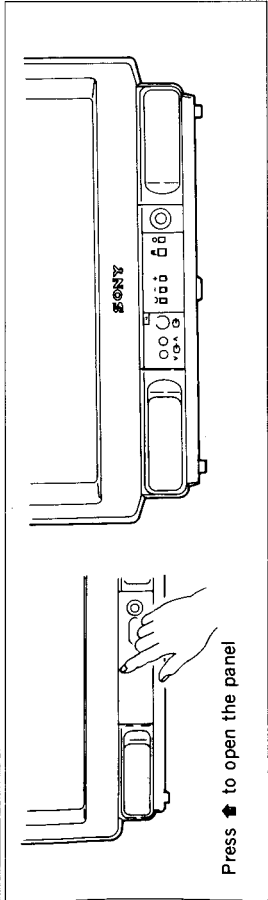
## Notes

- When you have Audio/video equipment connected to both the A/V connectors and the 21-pin terminal, make sure that not both are switched on at the same time, otherwise the picture could be incomplete.
- In case of sound or picture distortions move the VTR away from the TV set.

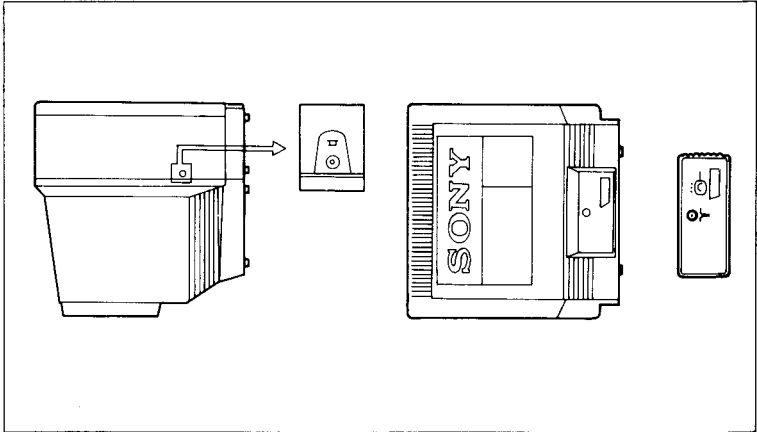
1-5. PARTS IDENTIFICATION

In the following you will find a short description of the parts and their function on the set or on the remote commander using the respective symbols. For more details refer to the page number given in the index.

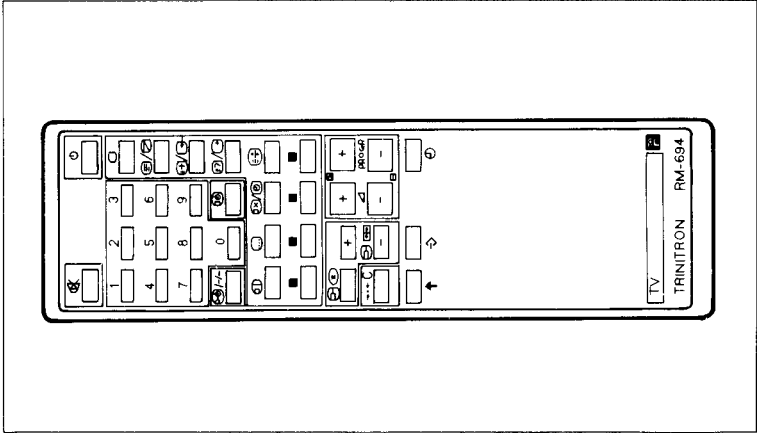
TV-Set Front



TV-Set Rear



Remote Commander



TV set	
Symbol	Function
	Headphones jack (mini-jack)
	Video input jack
	Audio input jack
	Buttons for sound and picture adjustment
	Programme scanning buttons
	Remote control detector
	Standby indicator
	Power switch
	Aerial socket (rear of the set)
	21-pin connector (rear of the set)

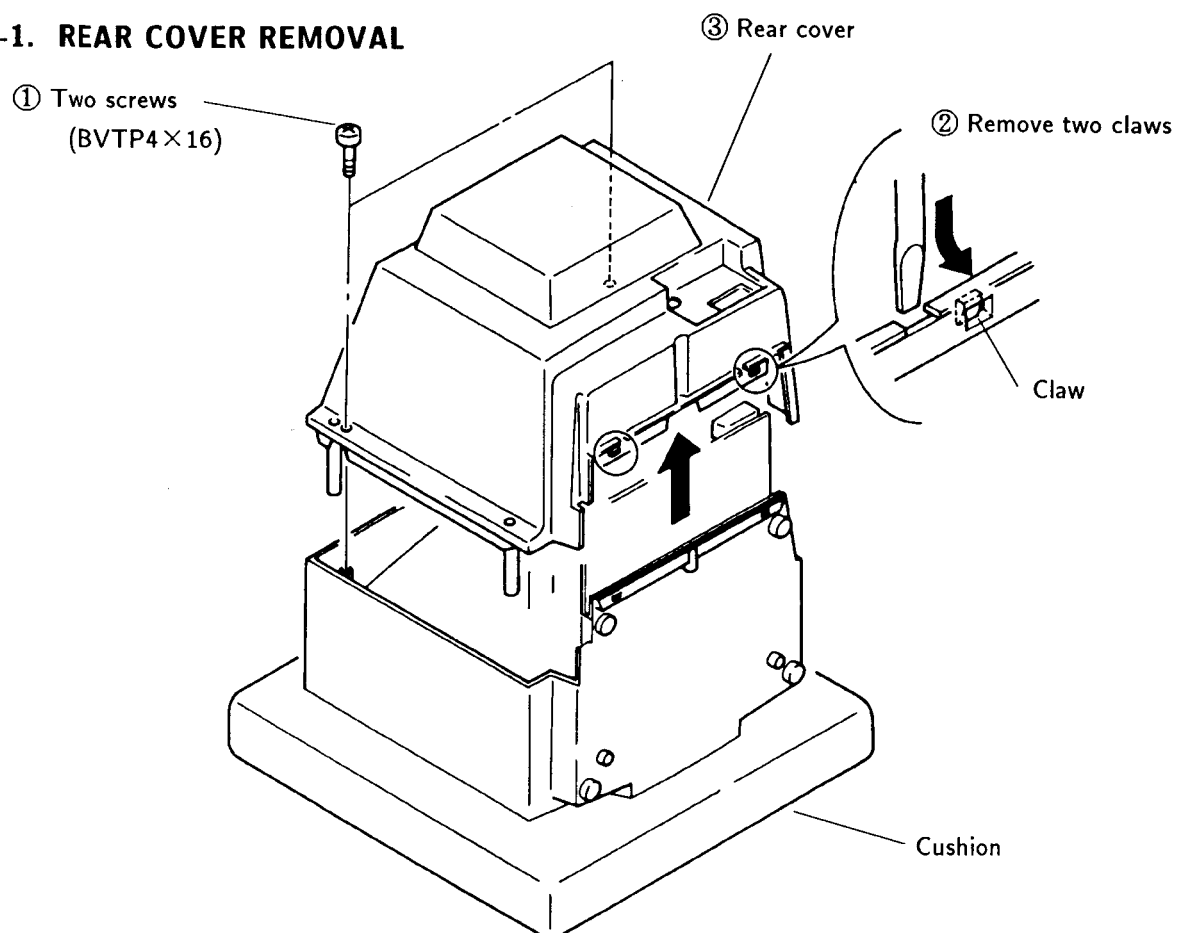
Remote Commander

Symbol	Function
	Mute button
	Number buttons — in case of two digit numbers first press button — / — — and then two number buttons
	Button has no function
	Select button for picture adjustment item
	Buttons for adjusting picture items
	Buttons for manual fine tuning of a channel / channel search
	Button for resetting the picture adjustment items to standard
	Buttons for clearing a programme position (in preset mode)
	Functions only in combination with other buttons
	Preset mode on / off buttons
	Button for switching the TV set into standby mode
	Used to return to TV-mode from standby and video input modes
	Button for selecting the video input modes
	On/off button for on screen display
	Time feature
	Programme scanning buttons
	Buttons for adjusting the volume
	Button for activating the sleep timer
	Teletext buttons
	FASTEXT buttons

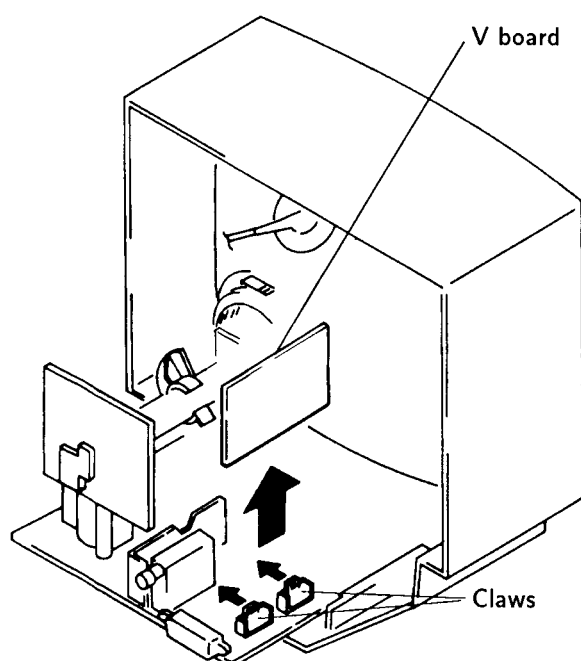
**Note** Buttons not referred to in this index have no function.  
The green buttons are for Teletext.

## SECTION 2 DISASSEMBLY

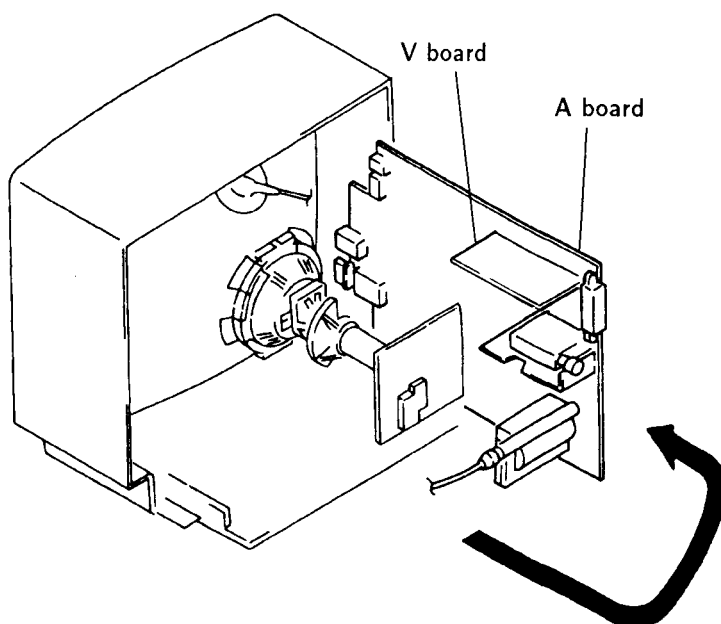
### 2-1. REAR COVER REMOVAL



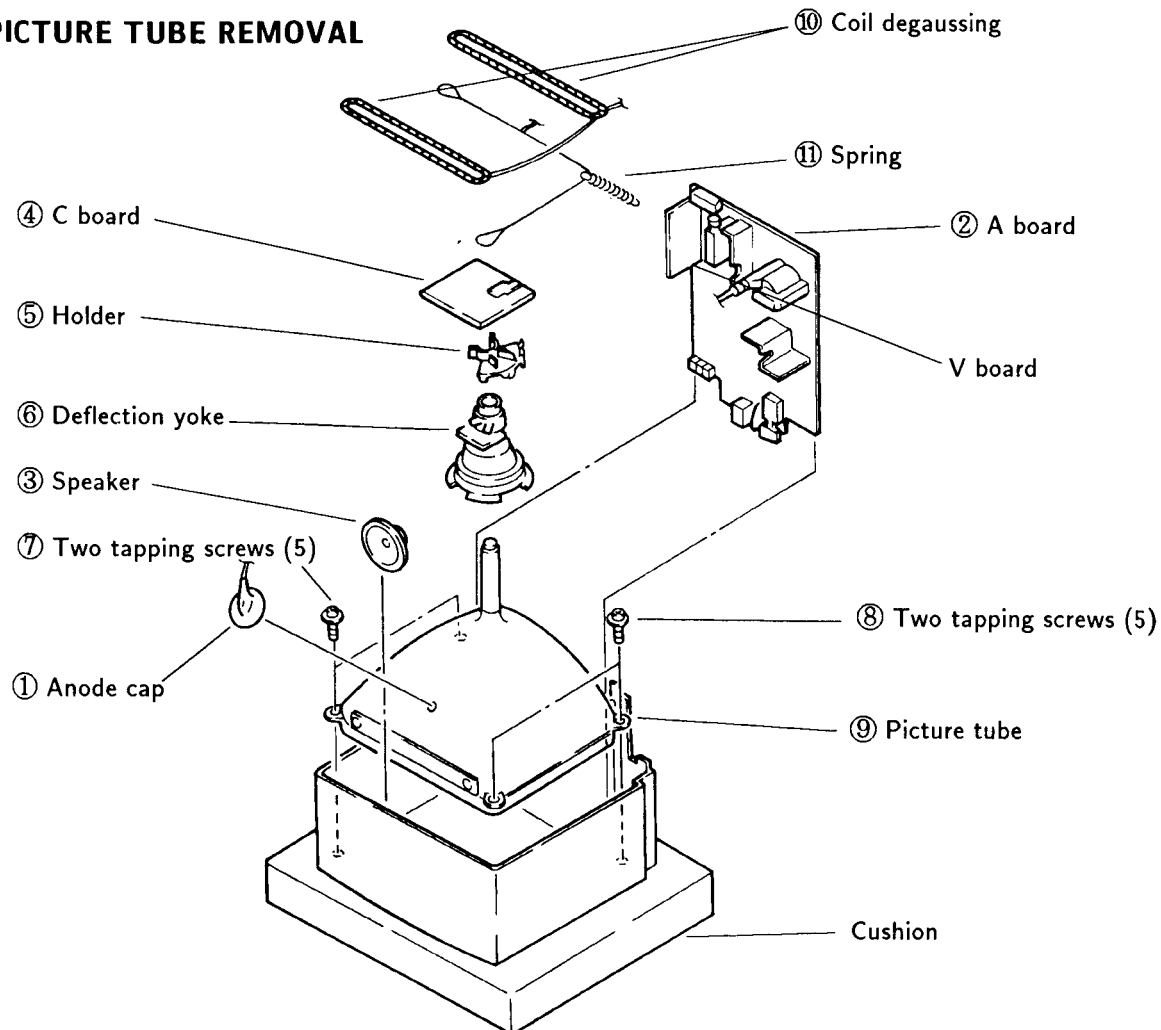
### 2-2. V BOARD REMOVAL



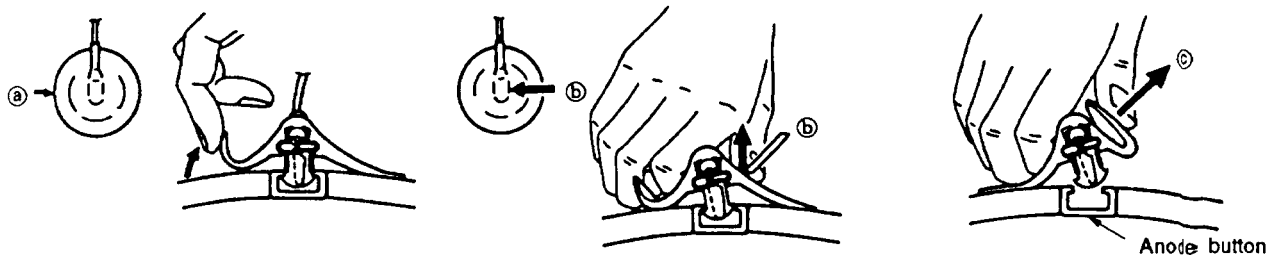
### 2-3. SERVICE POSITION





**2-4. PICTURE TUBE REMOVAL****• REMOVAL OF ANODE-CAP**

NOTE : Short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield or carbon painted on the CRT, after removing the anode.

**• REMOVING PROCEDURES**

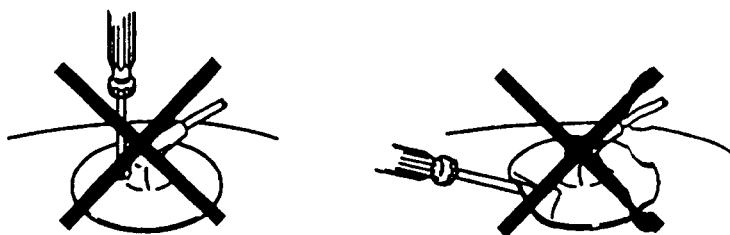
① Turn up one side of the rubber cap in the direction indicated by the arrow ①.

② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow ②.

③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling up it in the direction of the arrow ③.

**• HOW TO HANDLE AN ANODE-CAP**

- ① Don't hurt the surface of anode-caps with sharp shaped material!
- ② Don't press the rubber hardly not to hurt inside of anode-caps!  
A material fitting called as shatter-hook terminal is built in the rubber.
- ③ Don't turn the foot of rubber over hardly!  
The shatter-hook terminal will stick out or hurt the rubber.



## SECTION 3

### SET-UP ADJUSTMENTS

- The following adjustments should be made when a complete realignment is required or a new picture tube is installed.
  - These adjustments should be performed with rated power supply voltage unless otherwise noted.
- The controls and switch below should be set as follows unless otherwise noted :

● CONTRAST control ..... 80%(or Normal by commander)

☼ BRIGHTNESS control ..... 50%

Perform the adjustments in order as follows:

#### Preparation:

- Set the side of the unit with the PICTURE TUBE so that it faces east or west in order to reduce the influence of external magnetic force.
- Turn the power switch for the unit ON and erase the magnetic force using a degausser..

#### 3-1. BEAM LANDING

Demagnetize with a degausser

1. Input a raster signal with the pattern generator.
 

CONTRAST        } normal  
 BRIGHTNESS     }
2. Turn the raster signal of the pattern generator to red.
3. Move the deflection yoke backward, and adjust with the purity control so that red is in the center and blue and green are at the sides evenly.  
(Fig.3-1 - 3-3)
4. Move the deflection yoke forward, and adjust so that the entire screen becomes red. (Fig.3-1)
5. Switch over the raster signal to blue and blue and confirm the condition.
6. When the position of the deflection yoke is determined, tighten it with a deflection yoke mounting screw.
7. When landing at the corner is not right, adjust by using the disk magnets. (Fig.3-4)

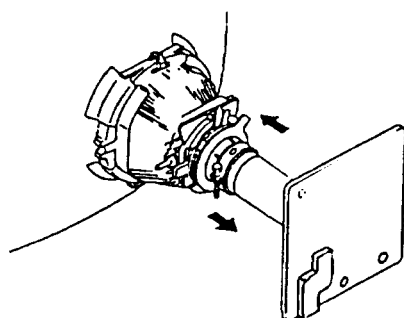


Fig.3-1

1. Beam Landing
2. Convergence
3. Focus
4. Screen (G 2) and White Balance

**Note:** Test Equipment Required.

1. Color bar/Pattern Generator
2. Degausser
3. DC Power Supply
4. Digital multimeter
5. Oscilloscope

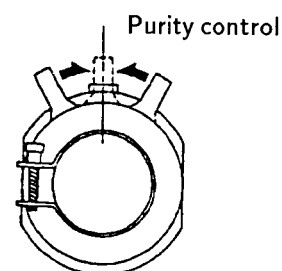


Fig.3-2

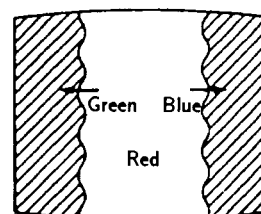


Fig.3-3

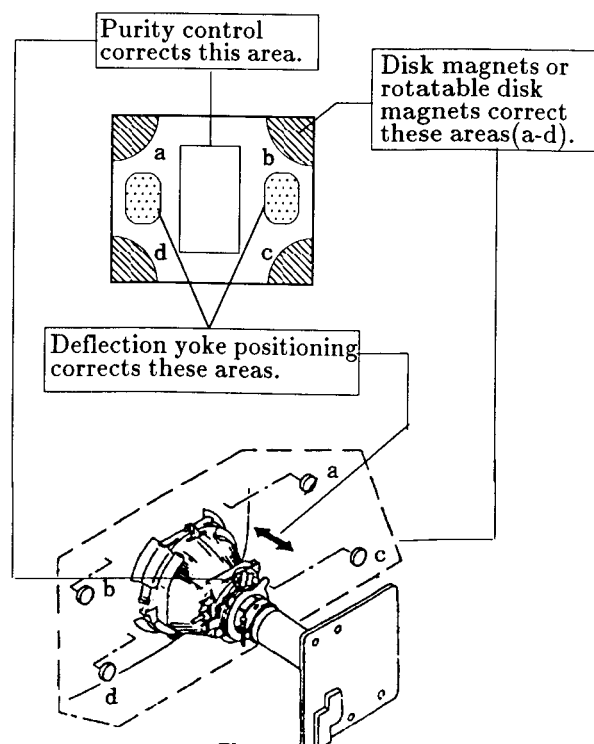


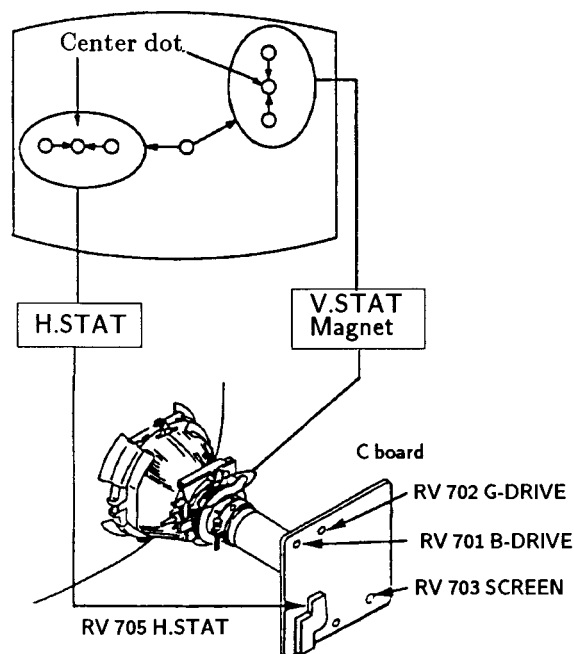
Fig.4

### 3-2. CONVERGENCE

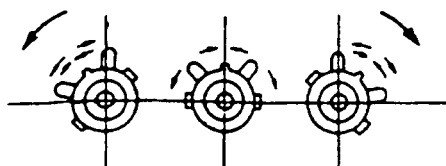
#### Preparation:

- Before starting, perform FOCUS, H.SIZE, and V. SIZE adjustments.
- Set BRIGHTNESS control to minimum.
- Feed in the dot pattern.

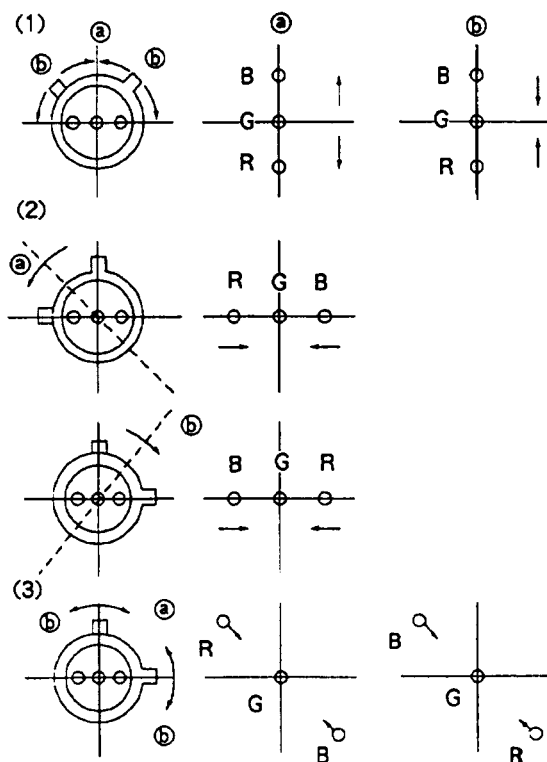
#### (1) Horizontal and Vertical Static Convergence



1. Adjust H.STAT VR to converge red, green and blue dots the in center of the screen.(Horizontal movement)
  2. Adjust V. STAT magnet to converge red, green and blue dots in the center of the screen. (Vertical movement)
  3. If the red, green and blue dots do not converge on the center of screen with H.STAT VR, perform horizontal convergence adjustment using H.STAT VR and V.STAT magnet as shown below. (In this case, H.STAT VR and V.STAT magnet effect each other.)
- Tilt the V.STAT magnet and adjust static convergence to open or close the V.STAT magnet.



4. When the V.STAT magnet is moved in the direction of arrow ② and ③, red, green and blue dots move as shown below.

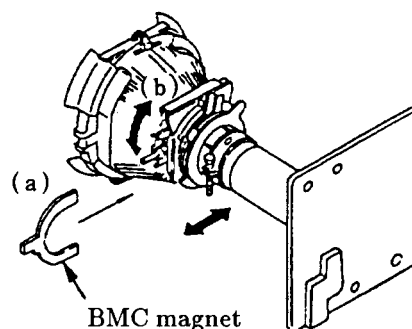


If the red and blue dot do not converge with green dots, perform following steps.

Move BMC magnet (a) to correct insufficient H.static convergence.

Rotate BMC magnet (b) to correct insufficient V.static convergence.

In either case, repeat Beam Landing Adjustment.



## (2) Dynamic Convergence Adjustment

### Preparation:

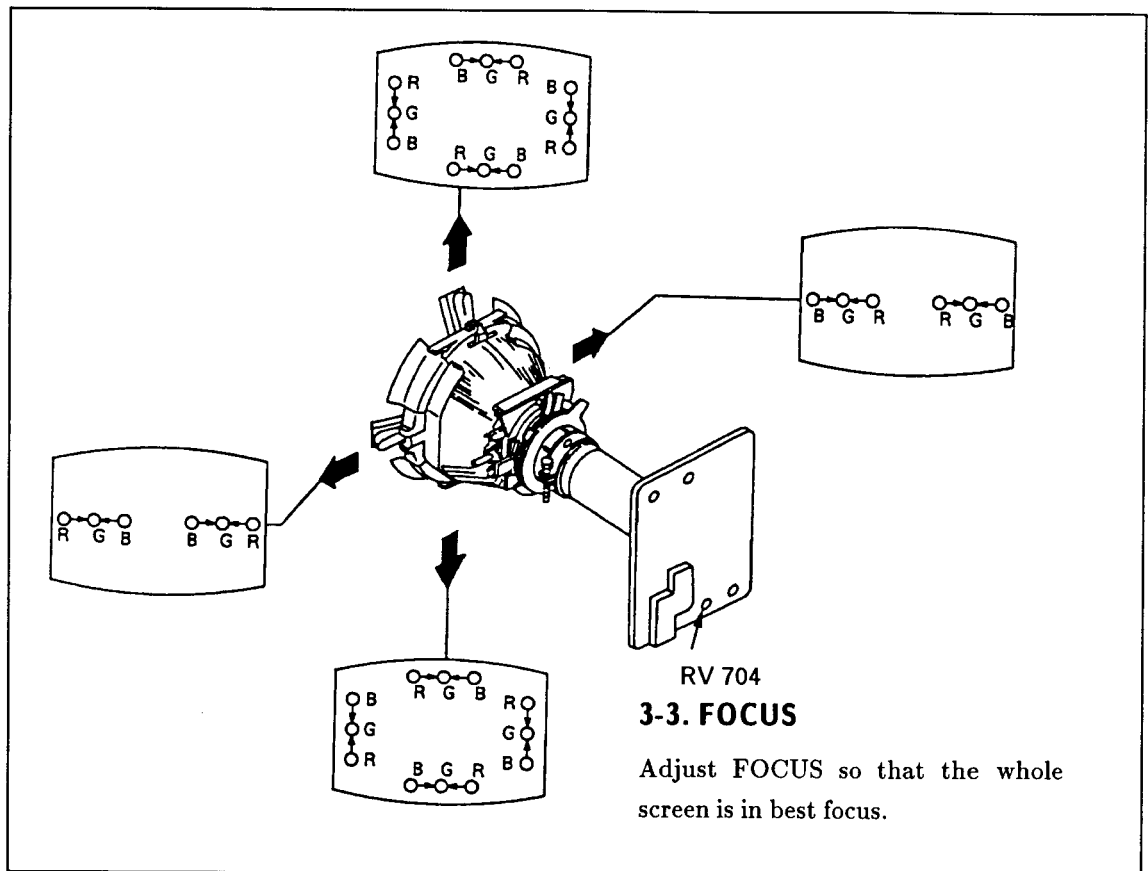
- Before starting perform Horizontal and Vertical static convergence Adjustment.

1. Slightly loosen deflection yoke screw.
2. Remove deflection yoke spacers.

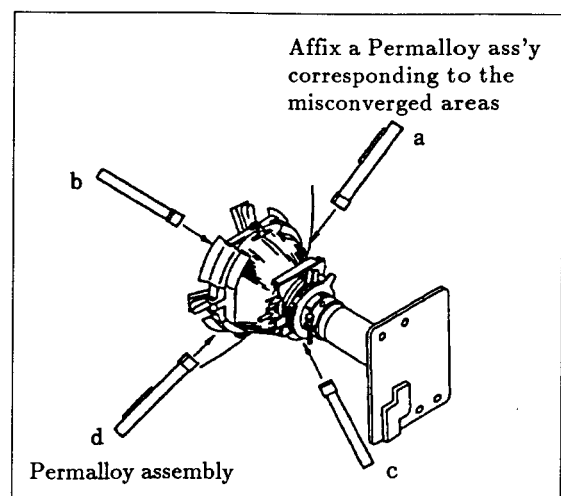
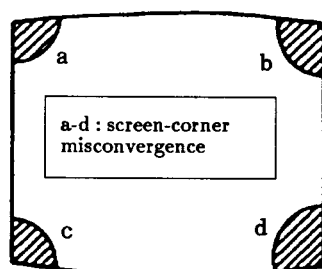
3. Move the deflection yoke for best convergence as shown below.

4. Tighten the deflection yoke screw.

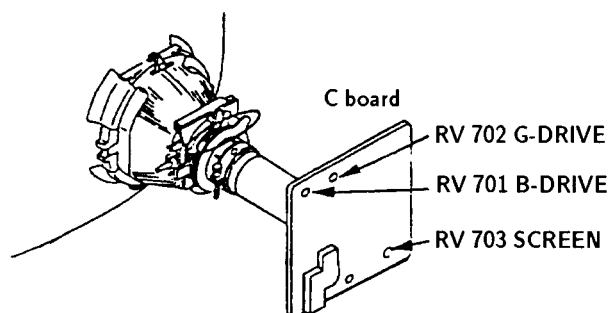
5. Install the deflection yoke spacers.



## (3) Screen-corner Convergence



### 3-4. SCREEN (G 2) and WHITE BALANCE



#### Screen (G 2) Setting

1. Input dot signal from the pattern generator.
2. Set the picture BRIGHTNESS control to minimum level.
3. Apply 140 V DC to the cathodes of R,G and B from an external power source.
4. While watching the picture, adjust the G 2 volume (RV703) immediately before fly-back line disappears.

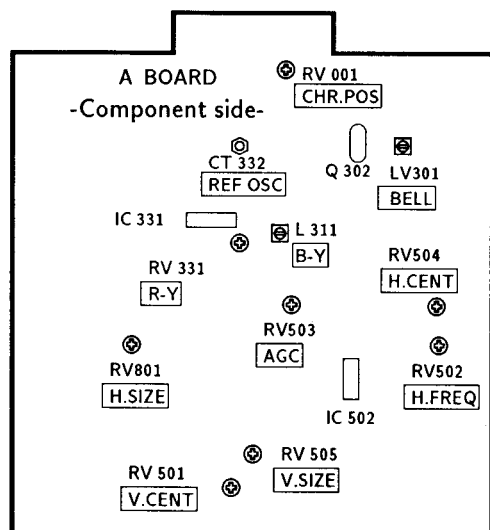
#### White Balance Adjustment

1. Input all-white signal from the pattern generator.
2. Adjust the BRIGHTNESS and COLOR controls to the standard level.
3. Adjust the following using RV 701 (B DRIVE) and RV 702 (G DRIVE)

In the following adjustments, the CONTRAST, COLOR and BRIGHTNESS controls are set to normal unless otherwise specified.

## SECTION 4 CIRCUIT ADJUSTMENTS

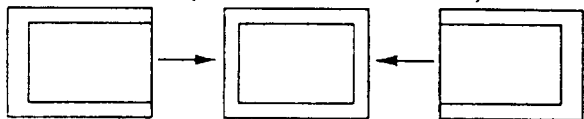
### 4-1. A BOARD ADJUSTMENTS



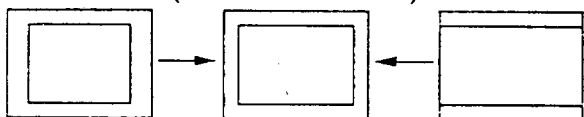
#### TU AGC Adjustment (RV 503)

1. Tune in air signal.
2. Adjust AGC VR (RV 503) so that snow-noise and cross-modulation just disappear from the picture.

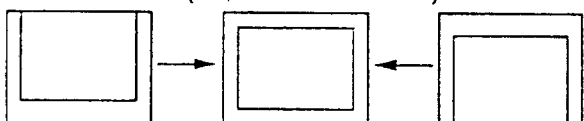
#### RV 504 H.CENT (HORIZONTAL CENTER)



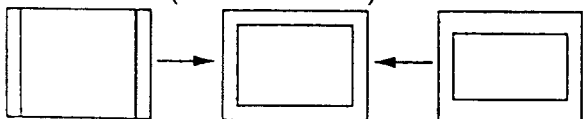
#### RV 801 H.SIZE (HORIZONTAL SIZE)



#### RV 501 V.CENT (VERTICAL CENTER)

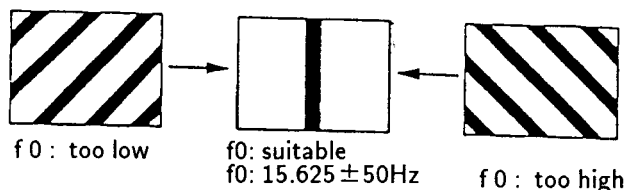


#### RV 505 V.SIZE (VERTICAL SIZE)



#### H.FREQ Adjustment (RV 502)

1. Input a PAL COLOR BAR signal, then connect an electrolytic capacitor (100  $\mu$ /16 V) between pin ② and GND of IC 502.
2. Adjust RV 502 (H.FREQ) to stop scrolling of the picture in the horizontal direction.
3. After adjustment, remove the electrolytic capacitor.

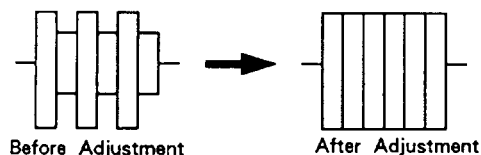


#### REF OSC 8.8 MHz Adjustment (CT 332)

1. Input a PAL COLOR BAR pattern.
2. Short circuit between pin ⑦ of IC 331 and ground.
3. Adjust CT 332 to obtain color synchronization.
4. Remove the jumper wire from IC 331.

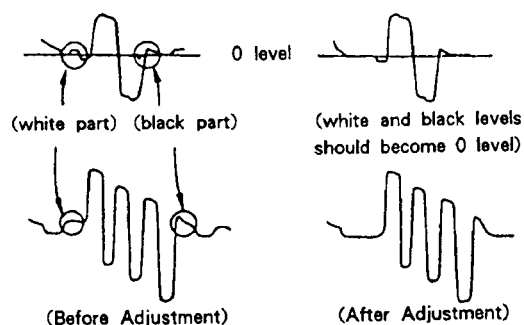
#### BELL FILTER Adjustment (LV-301)

1. Input a SECAM COLOR BAR pattern.
2. Connect an oscilloscope to the Q 302 emitter.
3. Adjust LV 301 so that waveform becomes flat.



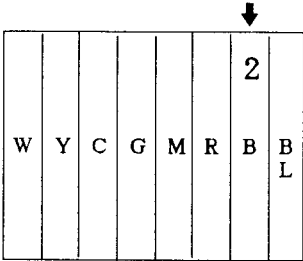
#### SECAM DISCRI Adjustment (RV 331 R-Y L 331 B-Y)

1. Input a SECAM COLOR BAR pattern.
2. Connect an oscilloscope to pin ① of IC 301.
3. Adjust RV 331(R-Y) so that white and black parts of the waveform of pin ① becomes 0 level.
4. Connect an oscilloscope to pin ③ of IC 301.
5. Adjust L 331(B-Y) so that white and black parts of the waveform of pin ③ becomes 0 level.

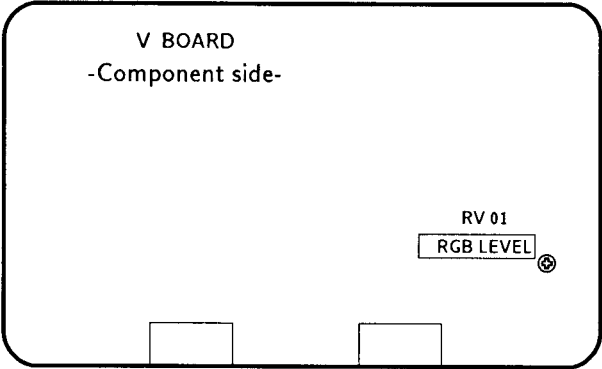


CHARACTER POSITION Adjustment (RV 001)

1. Input PAL COLOR BAR pattern.
2. Adjust RV 001 to position the charcter display at the point indicated by the arrow below.



4-2. V BOARD ADJUSTMENT



RGB LEVEL Adjustment (RV 01)

1. Set PICTURE to maximum.
2. Adjust RV01 till the RGB output becomes maximum.

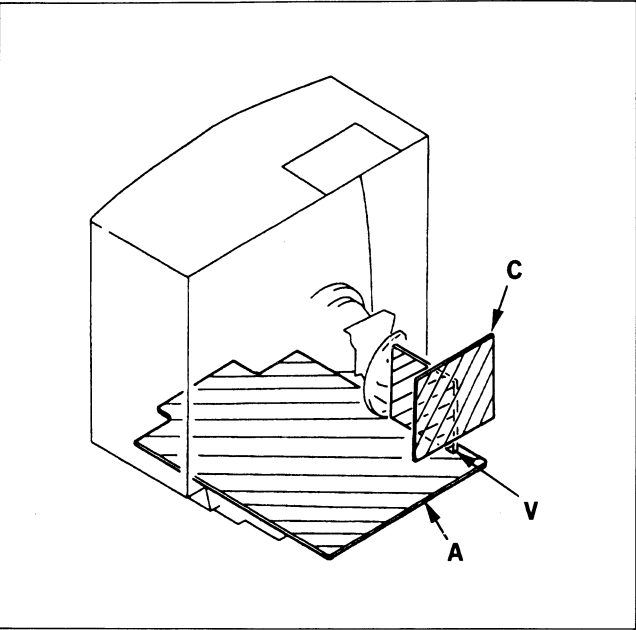
SECTION 5  
DIAGRAMS


SYSTEM CONTROL, A/V OUT,  
H/V OUT, MEMORY, CHROMA






A

A

5-1. CIRCUIT BOARDS LOCATION



Note: The components identified by shading and mark  are critical for safety. Replace only with part number specified.

- Note:
- All capacitors are in  $\mu\text{F}$  unless otherwise noted. pF :  $\mu\text{F}$   
50WV or less are not indicated except for electrolytics.
  - Indication of resistance, which does not have one for rating electrical power is as follows.
- Pitch : 5mm  
Rating electrical power : 1/4W
- Chip resistor is in 1/10W.
  - All resistors are in ohms. k $\Omega$ : 1000 $\Omega$ , M $\Omega$ : 1000k $\Omega$ .
  -  : nonflammable resistor.
  -  : fusible resistor.
  -  : panel designation and adjustment for repair.
  - All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
  - All voltage are in V.
  - Readings are taken with a 10M $\Omega$  digital multimeter.
  - Readings are taken with a color-bar signal input.
  - Voltage variations may be noted due to normal production tolerances.
  -  : B+ bus.
  -  : Signal path. (RF)

Reference information

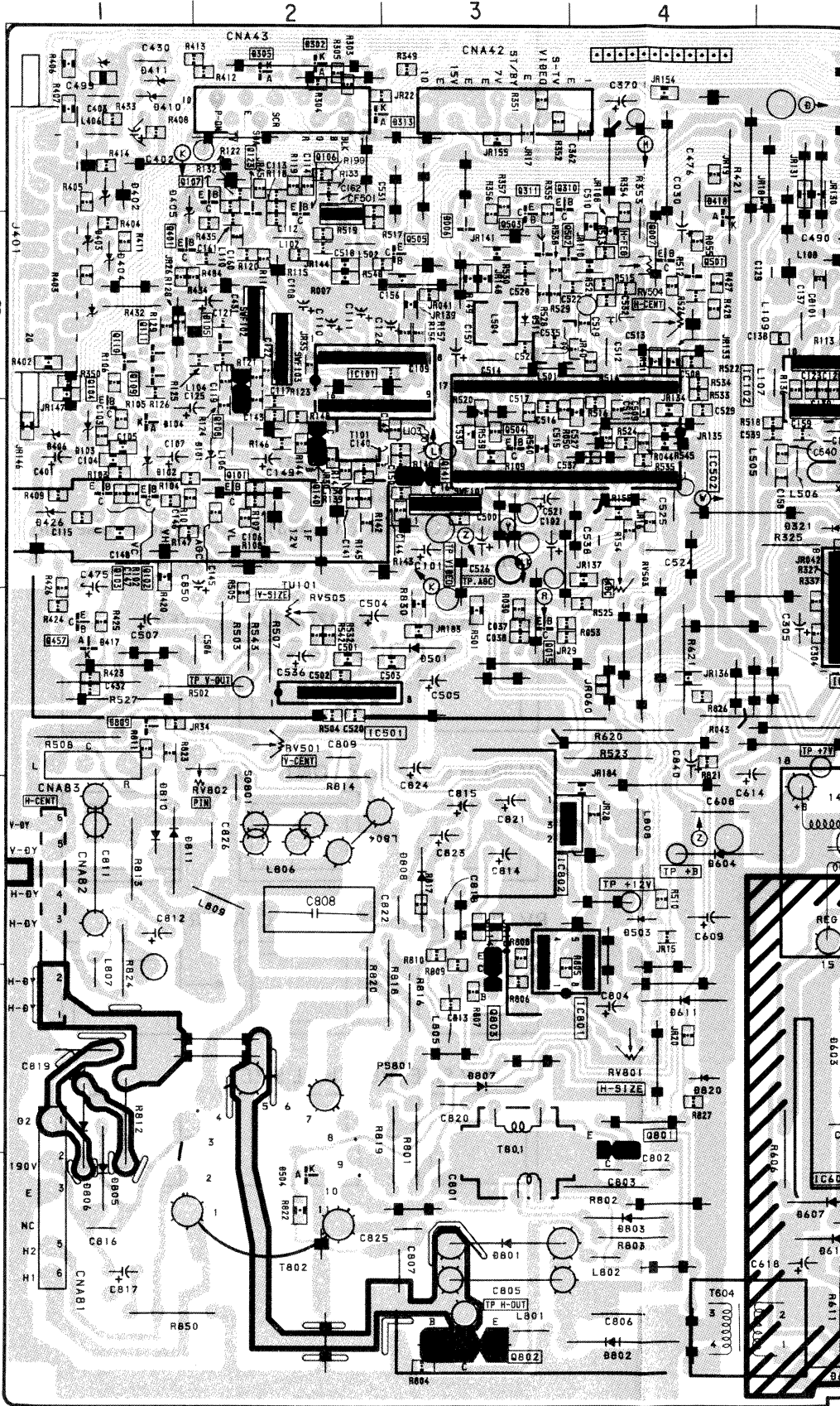
RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFLAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RS	NONFLAMMABLE WIREWOUND
	: RB	NONFLAMMABLE CEMENT
	: *	ADJUSTMENT RESISTOR
COIL	: LF-8L	MICRO INDUCTOR
CAPACITOR	: TA	TANTALUM
	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE
	: ALB	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: ALR	HIGH RIPPLE

5-2. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

—A Board—

IC		D104	C-1
IC001	C-9	D110	C-5
IC002	D-9	D301	C-6
IC003	D-10	D302	A-2
IC004	E-9	D303	B-6
IC005	B-8	D305	A-2
IC102	B-5	D306	B-6
IC201	F-8	D313	A-3
IC301	D-5	D321	C-5
IC302	B-7	D324	A-7
IC331	C-6	D333	D-7
IC501	D-2	D402	A-1
IC502	C-3	D403	B-1
IC601	G-5	D404	B-1
IC801	E-3	D405	A-1
IC802	E-4	D406	C-1
		D410	A-1
		D411	A-1
		D417	D-1
		D418	A-4
		D426	C-1
		D501	D-3
		D503	E-4
		D504	G-2
		D519	C-8
		D601	F-7
		D602	F-6
		D603	F-5
		D604	E-4
		D605	E-6
		D606	D-5
		D607	G-5
		D608	G-5
		D609	G-5
		D610	G-5
		D611	F-4
		D801	G-3
		D802	G-4
		D803	G-4
		D805	G-1
		D806	F-1
		D807	F-3
		D808	E-3
		D810	E-1
		D811	E-1
		D820	F-4
TRANSISTOR			
Q001	D-8		
Q003	D-9		
Q004	D-10		
Q005	B-8		
Q006	C-8		
Q007	B-4		
Q015	D-3		
Q016	D-10		
Q017	E-9		
Q019	D-10		
Q020	D-8		
Q101	C-2		
Q102	C-1		
Q103	C-1		
Q104	B-1		
Q106	A-2		
Q107	A-2		
Q112	A-7		
Q114	B-5		
Q115	A-6		
Q141	C-3		
Q302	C-7		
Q303	B-7		
Q304	B-6		
Q305	B-6		
Q307	B-6		
Q310	A-3		
Q311	A-3		
Q401	B-1		
Q457	D-1		
Q504	C-3		
Q505	B-3		
Q601	G-5		
Q801	F-4		
Q802	G-3		
Q803	E-3		
DIODE			
D002	E-10		
D004	C-9		
D007	B-8		
D008	D-10		
D009	B-8		
D020	B-8		
D101	C-2		
D102	C-1		
D103	C-1		
		VARIABLE RESISTOR	
		RV001	D-9
		RV331	C-6
		RV501	D-2
		RV502	B-4
		RV503	C-4
		RV504	B-4
		RV505	D-2
		RV801	F-4
		TRIMMER	
		CT332	C-7

—A Board—

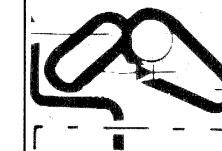




SYSTEM CONTROL, A/V OUT,  
H/V OUT, MEMORY, CHROMA

A

A



## NOTE:

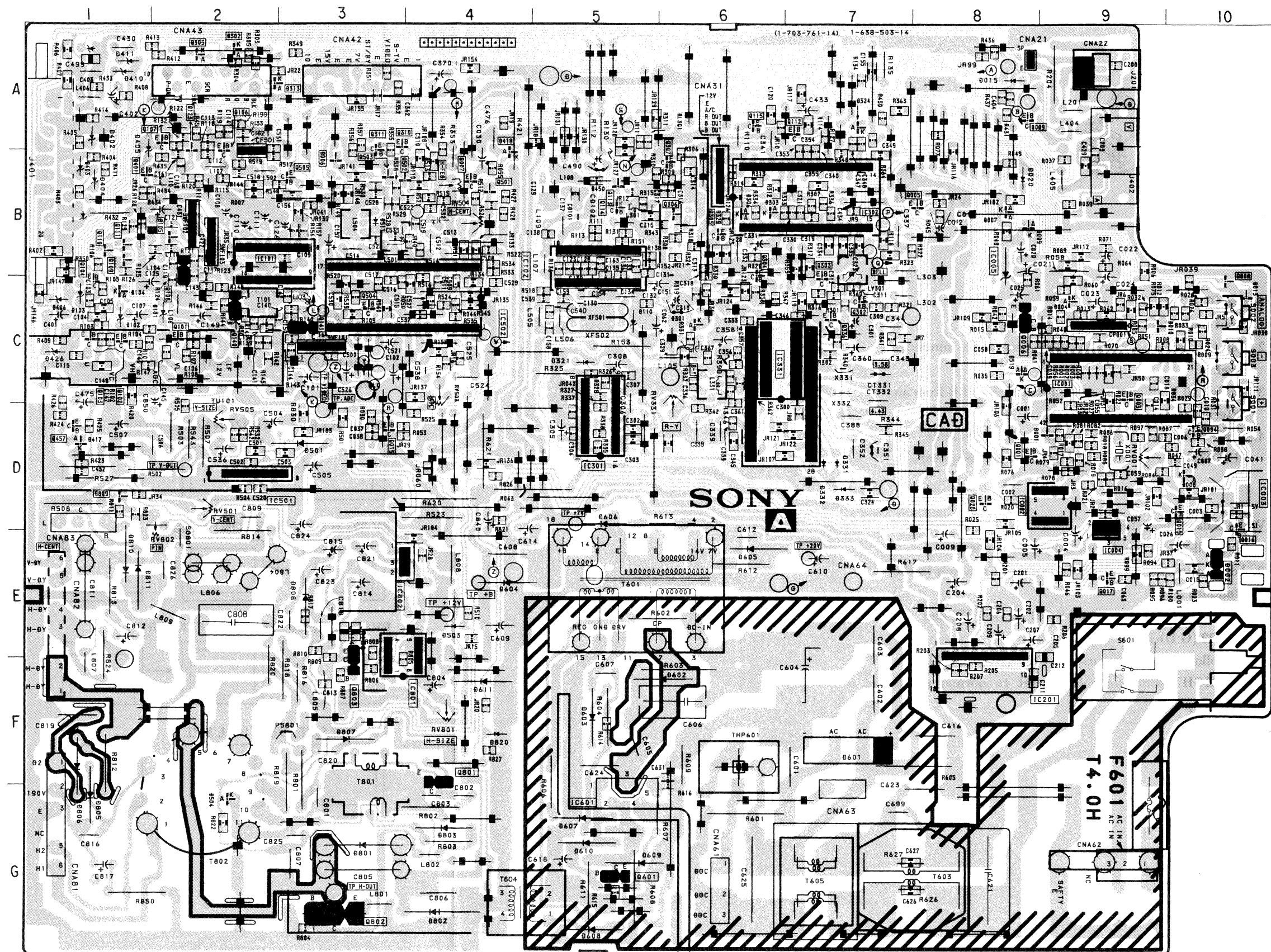
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

## 5-2. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

—A Board—

IC		D104	C-1
IC001	C-9	D110	C-5
IC002	D-9	D301	C-6
IC003	D-10	D302	A-2
IC004	E-9	D303	B-6
IC005	B-8	D305	A-2
IC102	B-5	D306	B-6
IC201	F-8	D313	A-3
IC301	D-5	D321	C-5
IC302	B-7	D324	A-7
IC331	C-6	D333	D-7
IC501	D-2	D402	A-1
IC502	C-3	D403	B-1
IC601	G-5	D404	B-1
IC801	E-3	D405	A-1
IC802	E-4	D406	C-1
TRANSISTOR		D410	A-1
Q001	D-8	D411	A-1
Q003	D-9	D417	D-1
Q004	D-10	D418	A-4
Q005	B-8	D426	C-1
Q006	C-8	D501	D-3
Q007	B-4	D503	E-4
Q015	D-3	D504	G-2
Q016	D-10	D519	C-8
Q017	E-9	D601	F-7
Q019	D-10	D602	F-6
Q020	D-8	D603	F-5
Q101	C-2	D604	E-4
Q102	C-1	D605	E-6
Q103	C-1	D606	D-5
Q104	B-1	D607	G-5
Q106	A-2	D608	G-5
Q107	A-2	D609	G-5
Q112	A-7	D610	G-5
Q114	B-5	D611	F-4
Q115	A-6	D801	G-3
Q141	C-3	D802	G-4
Q302	C-7	D803	G-4
Q303	B-7	D805	G-1
Q304	B-6	D806	F-1
Q305	B-6	D807	F-3
Q307	B-6	D808	E-3
Q310	A-3	D810	E-1
Q311	A-3	D811	E-1
Q401	B-1	D820	F-4
Q457	D-1	VARIABLE RESISTOR	
Q504	C-3	RV001	D-9
Q505	B-3	RV331	C-6
Q601	G-5	RV501	D-2
Q801	F-4	RV502	B-4
Q802	G-3	RV503	C-4
Q803	E-3	RV504	B-4
DIODE		RV505	D-2
D002	E-10	RV801	F-4
D004	C-9	TRIMMER	
D007	B-8	CT332	C-7
D008	D-10		
D009	B-8		
D020	B-8		
D101	C-2		
D102	C-1		
D103	C-1		

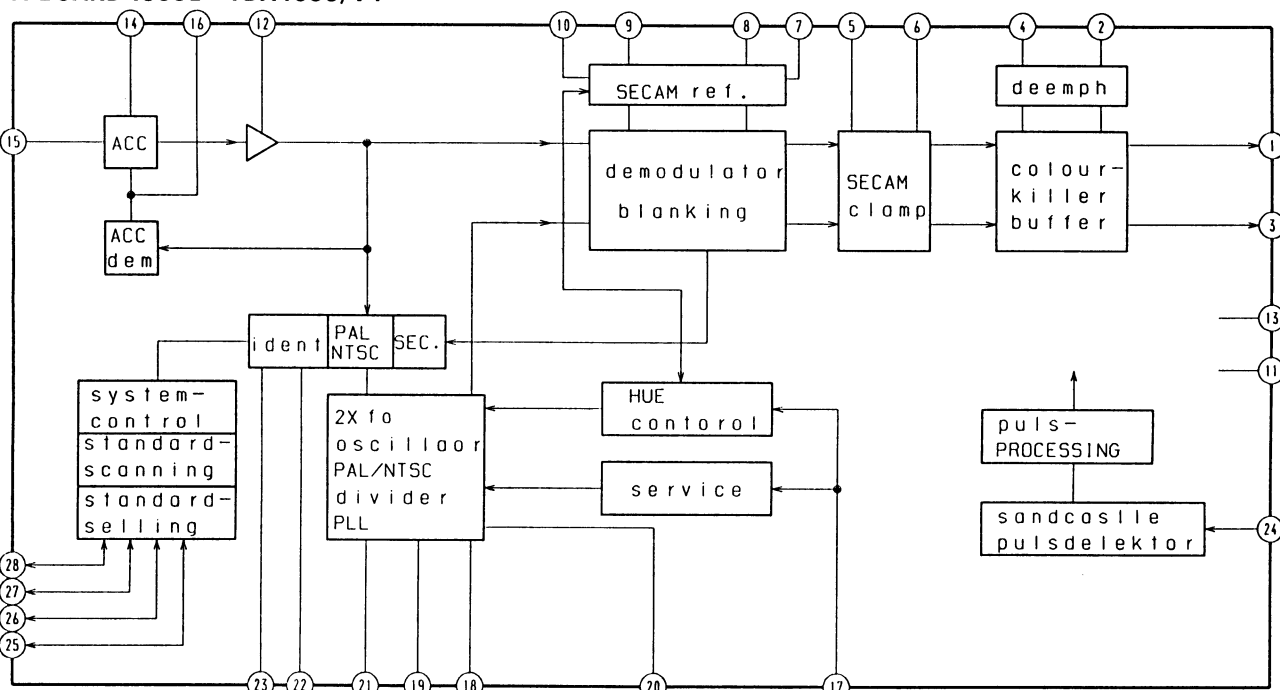
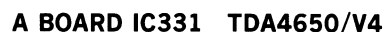
—A Board—



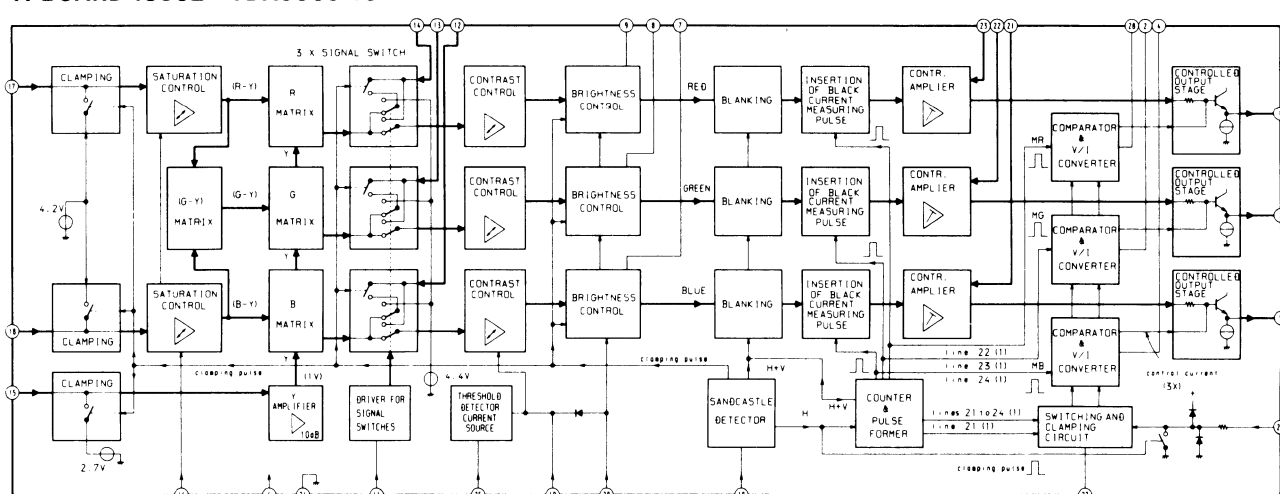




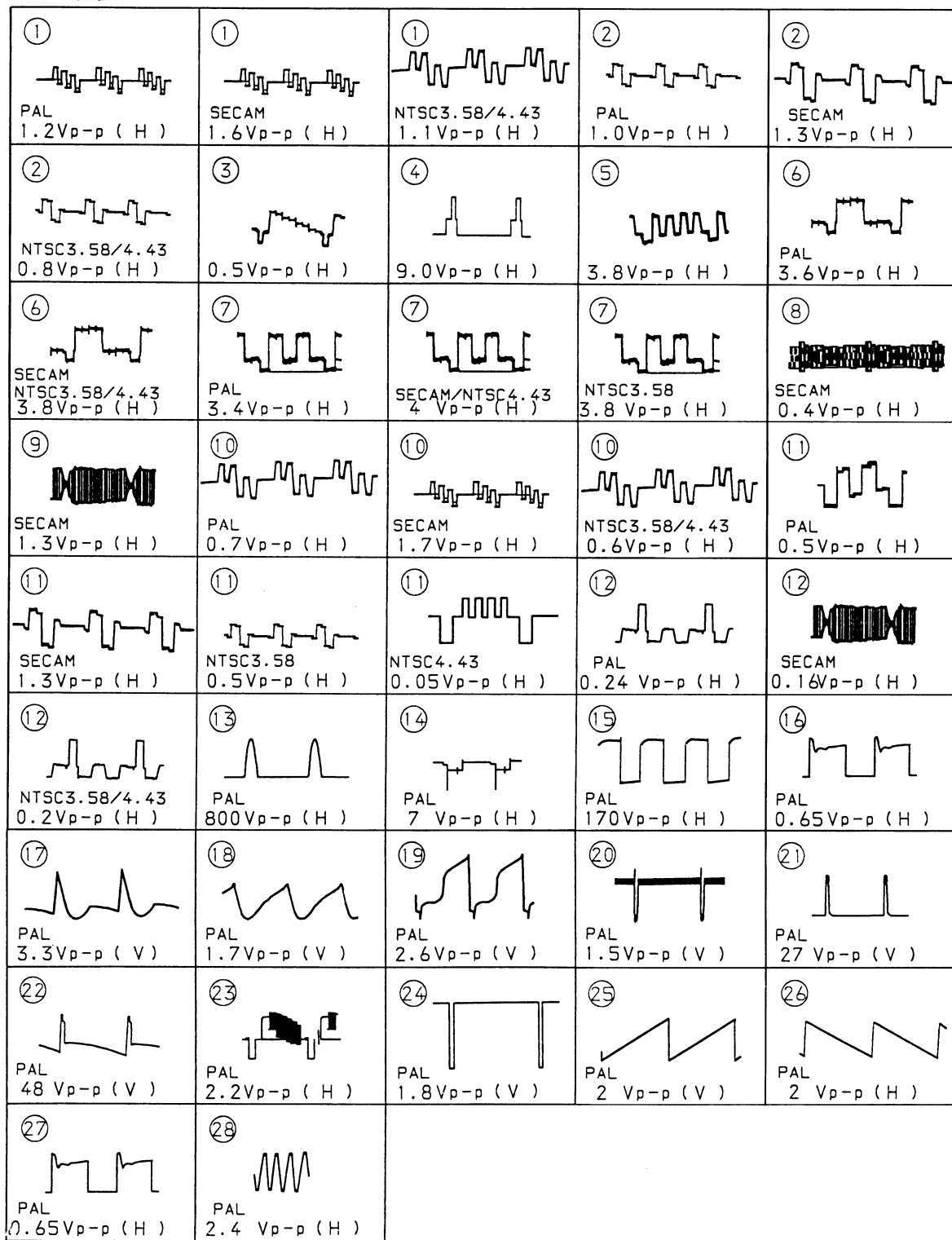


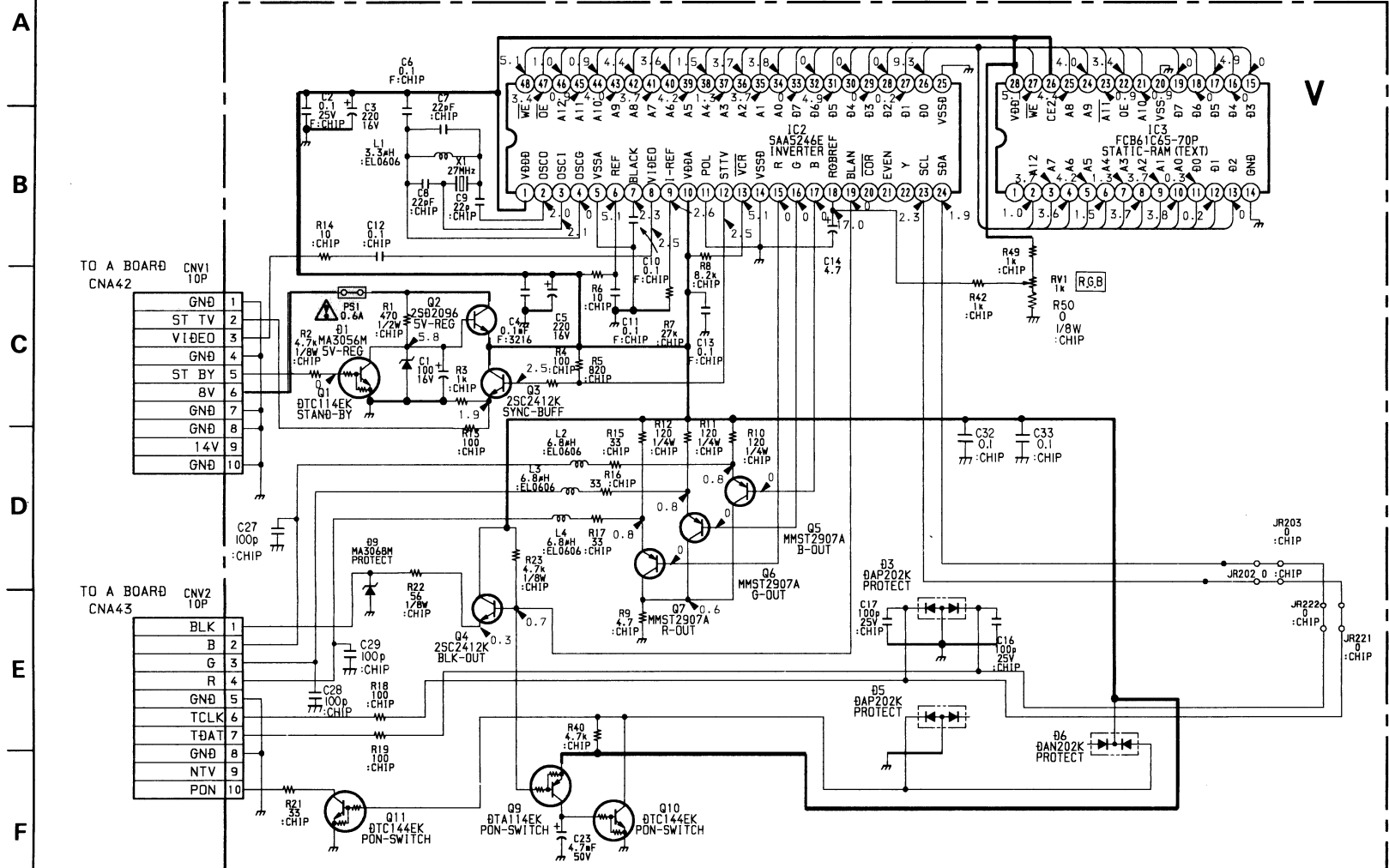


**A BOARD IC302 TDA3505-V9**



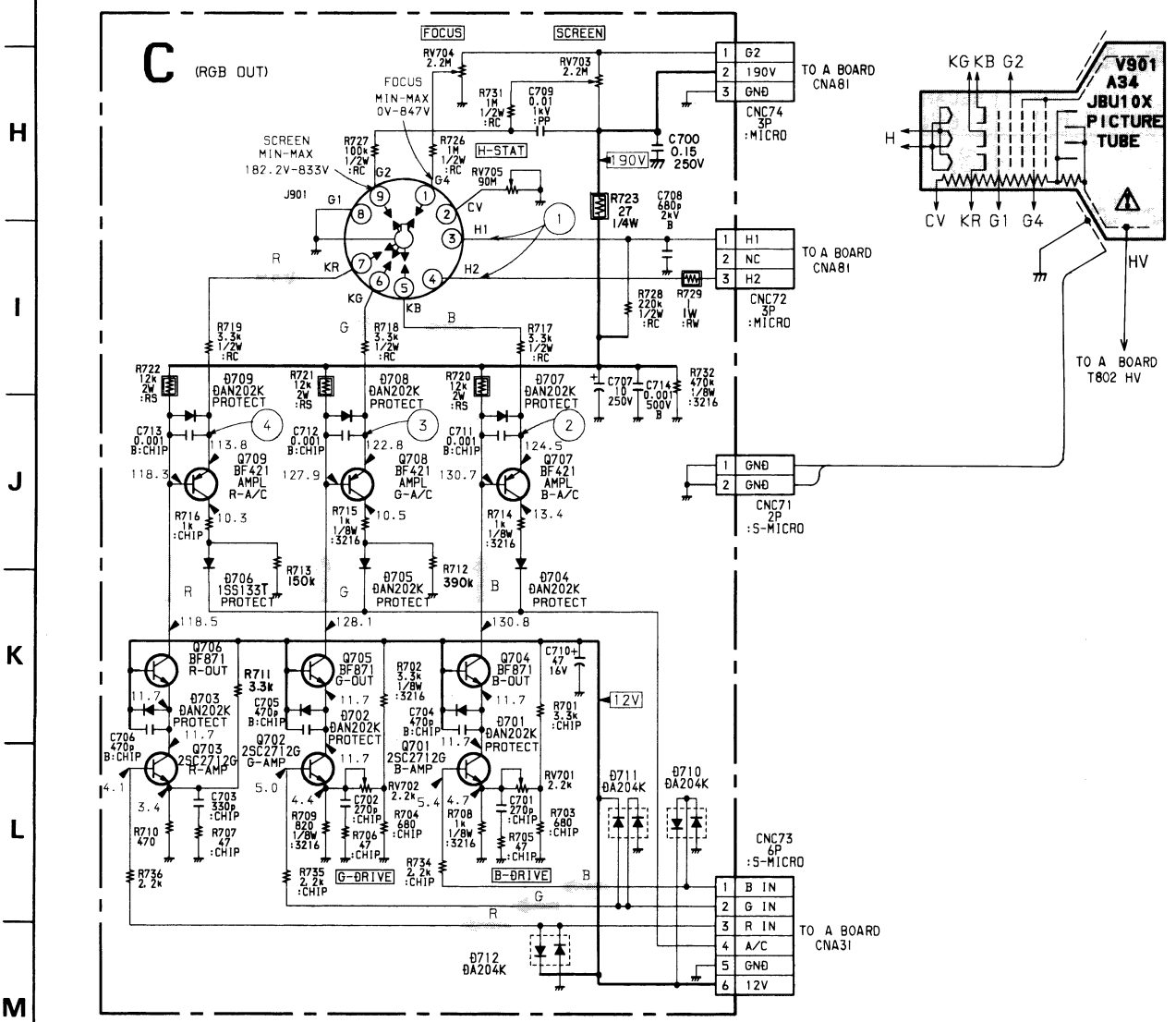
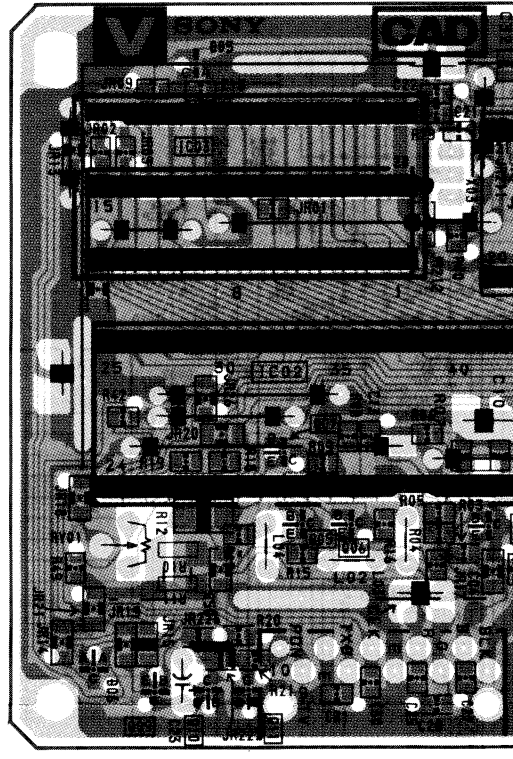
- **A Board**



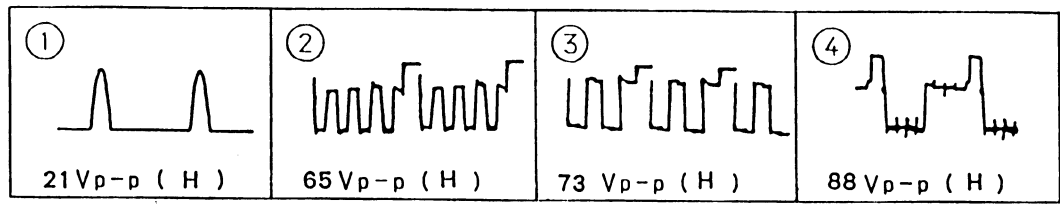


B-SS4050<AEP>-V..

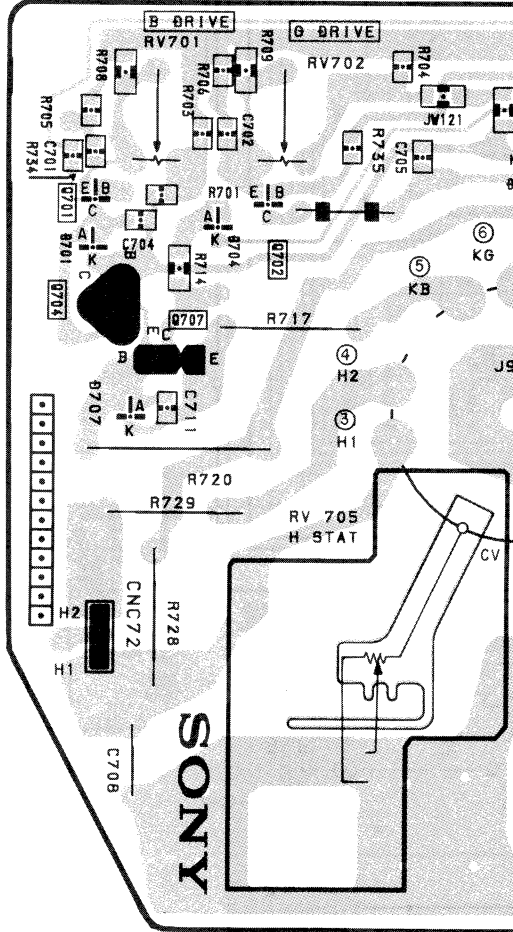
— V Board —



• C Board



— C Board —

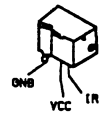




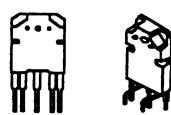


### 5-3. SEMICONDUCTOS

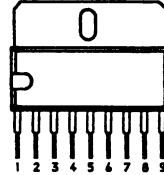
KEY-C00SV-F



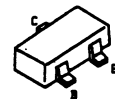
STR54041



$\mu$ PC1488H



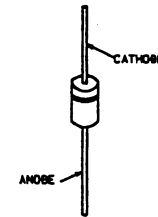
DTA143EK  
DTA143TK  
DTA144EK  
DTC124EK  
DTC144EK  
2SA1162G  
2SB1295-UL6  
2SC1623-L5L6  
2SC2712YG



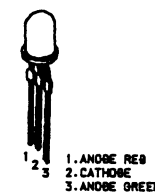
2SD2096-EF



ERC06-15S



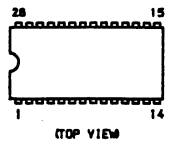
SPR-54MVW



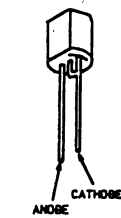
L78LR05D-MA



TDA3505-V1  
FCB61C65-70P  
TDA4650/V4



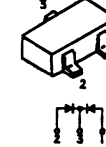
$\mu$ PC574J



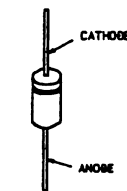
BC637-16  
2SA1091-0



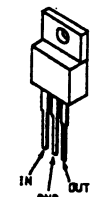
MA152WK



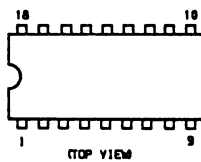
EGP20G  
RGP02-17  
R2M  
RU-3AM



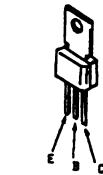
M5F78M12L



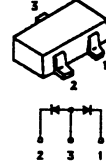
TDA3827-V3  
TDA7245



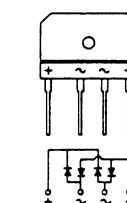
BF871



DAP202K



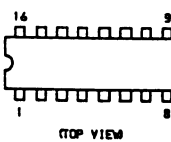
RBV-406H-01



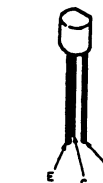
PCA84C840P-011



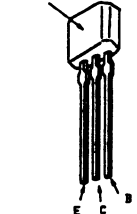
TDA4660V2



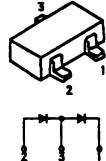
BF959-AMMO



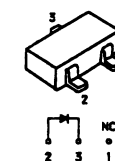
2SC2410SN  
MARKING SIDE VIEW



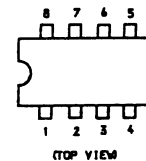
1SS226



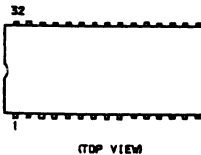
RD5.1M-B2  
RD5.6M-B2  
RD6.8M-B2



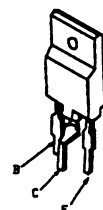
RC4558P  
ST24C02CP



TDA8304



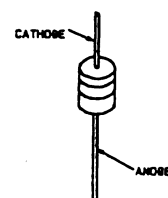
BU508AS2



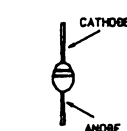
2SC2688-LK



ERA83-006  
R5.6ES-B2  
UZ5.1BS-B  
HZS6.8N-B  
HZS7.5N-B3  
HZS8.2N-B3



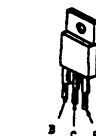
U05G



SAA3246P/E



2SD1408-Y



SECTION 6  
EXPLODED VIEW

## NOTE:

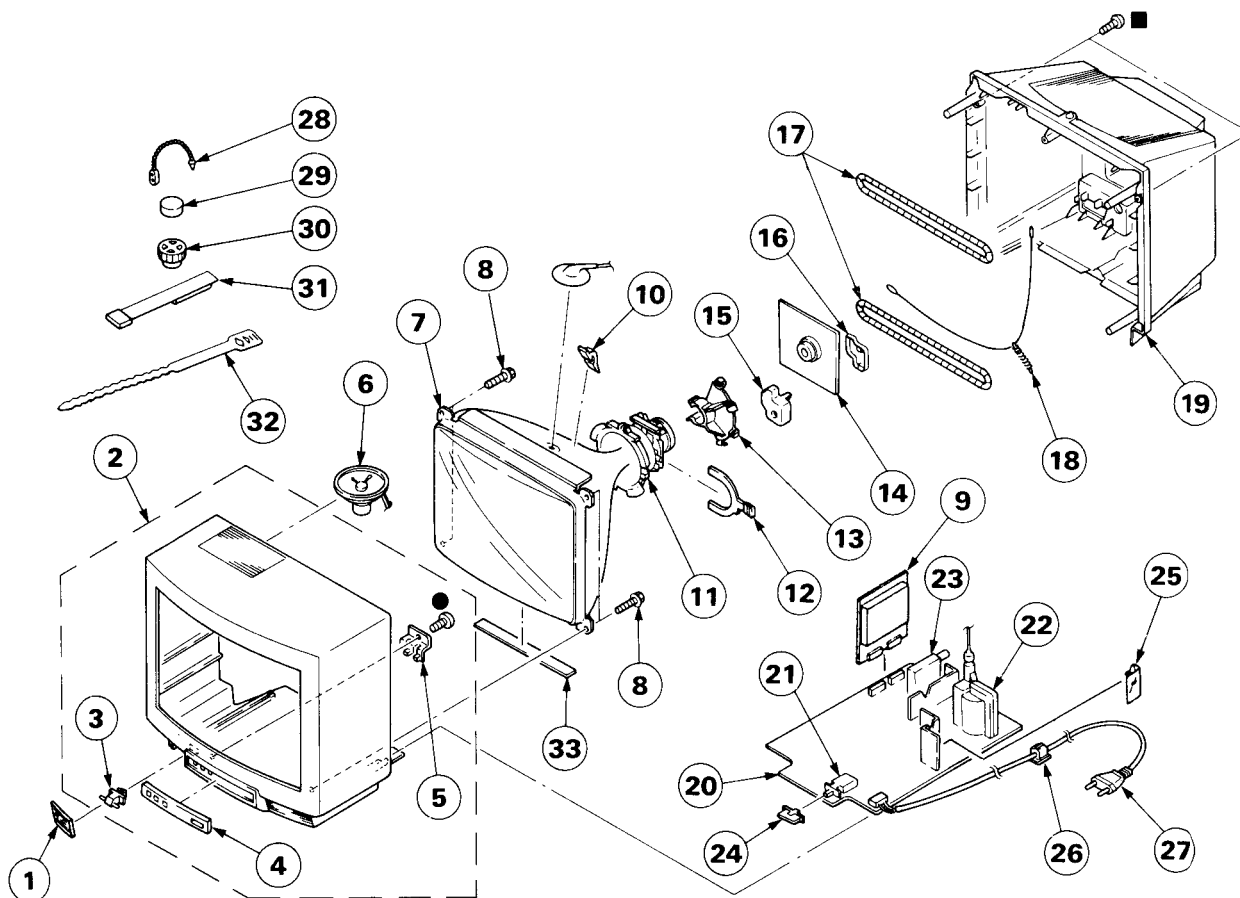
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.

- Items marked " \* " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and mark  $\Delta$  are critical for safety.  
Replace only with part number specified.

● : BVTP3×12 7-685-648-79

■ : BVTP4×16 7-685-663-79



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
1	4-200-403-11	LID, CONTROL (WHITE)		18	4-369-318-00	SPRING, TENSION	
	4-200-403-21	LID, CONTROL (BLACK)		19	4-200-410-01	COVER, REAR (BLACK)	
2	X-4200-049-2	CABINET ASSY(WITH BEZEL ASSY)(WHITE) 3~5			4-200-410-11	COVER, REAR (WHITE)	
	X-4200-049-3	CABINET ASSY(WITH BEZEL ASSY)(BLACK) 3~5		20	*A-1632-072-A	A BOARD, COMPLETE	
3	3-703-035-11	SHAFT, LID		21	$\Delta$ 1-571-433-12	SWITCH, PUSH (AC POWER)	
4	4-200-406-01	WINDOW, ORNAMENTAL		22	$\Delta$ 1-439-432-11	TRANSFORMER ASSY, FLYBACK (UX-1620)	
5	4-200-405-01	BUTTON, MULTI		23	$\Delta$ 1-465-541-11	TUNER (BT-3C 301)	
6	1-544-374-11	SPEAKER		24	4-200-404-01	BUTTON, POWER	
7	$\Delta$ 8-735-555-75	PICTURE TUBE (A34JBU10X)		25	*4-200-400-01	PLATE, INSULATION	
8	4-307-249-00	SCREW (5), TAPPING		26	$\Delta$ 4-389-201-03	HOLDER, AC CORD	
9	*A-1645-017-A	V BOARD, COMPLETE		27	$\Delta$ 1-575-487-11	CORD, POWER (WITH NOISE FILTER)	
10	3-704-495-01	SPACER, DY		28	4-308-870-00	CLIP, LEAD WIRE	
11	$\Delta$ 1-451-249-31	DEFLECTION YOKE (Y1ANDA2)		29	1-452-032-00	MAGNET, DISK; 10MM $\phi$	
12	1-452-277-00	MAGNET, BMC		30	1-452-094-00	MAGNET, ROTATABLE DISK; 15MM $\phi$	
13	*4-385-422-01	HOLDER, LEAD		31	X-4309-608-0	PERMALLOY ASSY, CONVERGENCE	
14	*A-1638-008-A	C BOARD, COMPLETE		32	3-701-007-00	BAND, BINDING	
15	*4-374-912-01	COVER (MAIN), CV VOL		33	4-389-350-11	CUSHION, PICTURE TUBE	
16	*4-374-913-01	COVER (REAR LID), CV VOL					
17	$\Delta$ 1-426-145-21	COIL, DEGAUSSING					



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SECTION 7  
ELECTRICAL PARTS LIST

## NOTE:

- Items marked " \* " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

## RESISTORS

- All resistors are in ohms
- F : nonflammable

When indicating parts by reference number, please include the board name.

## CAPACITORS

MF :  $\mu$ F, PF :  $\mu$ F

## COILS

MMH : mH, UH :  $\mu$ H

The components identified by shading and mark  $\Delta$  are critical for safety.  
Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
	*A-1632-072-A	A BOARD, COMPLETE *****		C130	1-136-171-00	FILM 0.33MF	5% 50V
	*1-535-064-00	1P TERMINAL PIN		C131	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
	4-200-399-01	SPACER, 1C		C132	1-163-029-11	CERAMIC CHIP 0.0047MF	50V
	4-201-057-01	COVER, FUSE		C133	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
	*4-341-751-01	EYELET		C134	1-106-365-00	MYLAR 0.0082MF	10% 400V
	*4-341-752-01	EYELET		C135	1-163-033-00	CERAMIC CHIP 0.022MF	50V
				C136	1-163-033-00	CERAMIC CHIP 0.022MF	50V
				C138	1-216-295-00	METAL GLAZE 0	5% 1/10W
				C139	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
	<CAPACITOR>			C140	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V
C001	1-126-101-11	ELECT 100MF	20% 16V	C141	1-163-017-00	CERAMIC CHIP 0.047MF	10% 50V
C002	1-106-220-00	MYLAR 0.1MF	10% 100V	C142	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V
C003	1-163-031-11	CERAMIC CHIP 0.01MF	50V	C143	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V
C004	1-123-362-00	ELECT 3.3MF	20% 50V	C144	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V
C005	1-126-101-11	ELECT 100MF	20% 16V	C145	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V
C006	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C146	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V
C007	1-124-907-11	ELECT 10MF	20% 50V	C147	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V
C009	1-124-907-11	ELECT 10MF	20% 50V	C148	1-164-665-11	CERAMIC CHIP 0.039MF	10% 50V
C010	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C149	1-126-101-11	ELECT 100MF	20% 16V
C012	1-126-233-11	ELECT 22MF	20% 50V	C151	1-124-907-11	ELECT 10MF	20% 50V
C018	1-163-031-11	CERAMIC CHIP 0.01MF	50V	C154	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C020	1-124-903-11	ELECT 1MF	20% 50V	C157	1-124-927-11	ELECT 4.7MF	20% 50V
C021	1-124-907-11	ELECT 10MF	20% 50V	C163	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C023	1-124-907-11	ELECT 10MF	20% 50V	C200	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C024	1-124-907-11	ELECT 10MF	20% 50V	C201	1-126-233-11	ELECT 22MF	20% 50V
C025	1-126-233-11	ELECT 22MF	20% 50V	C202	1-124-925-11	ELECT 2.2MF	20% 50V
C026	1-124-903-11	ELECT 1MF	20% 50V	C203	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
C030	1-124-903-11	ELECT 1MF	20% 50V	C204	1-124-480-11	ELECT 470MF	20% 25V
C037	1-163-034-00	CERAMIC CHIP 0.033MF	50V	C206	1-163-011-11	CERAMIC CHIP 0.0015MF	10% 50V
C038	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	C207	1-124-925-11	ELECT 2.2MF	20% 50V
C039	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C208	1-126-104-11	ELECT 470MF	20% 35V
C041	1-124-478-11	ELECT 100MF	20% 25V	C209	1-124-910-11	ELECT 47MF	20% 50V
C055	1-163-075-00	CERAMIC CHIP 0.047MF	50V	C211	1-163-077-00	CERAMIC CHIP 0.1MF	10% 25V
C058	1-163-077-00	CERAMIC CHIP 0.1MF	10% 25V	C212	1-164-348-11	CERAMIC CHIP 0.12MF	10% 25V
C059	1-163-031-11	CERAMIC CHIP 0.01MF	50V	C300	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C062	1-126-101-11	ELECT 100MF	20% 16V	C302	1-163-059-00	CERAMIC CHIP 0.01MF	50V
C063	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V	C303	1-163-059-00	CERAMIC CHIP 0.01MF	50V
C101	1-124-477-11	ELECT 47MF	20% 16V	C304	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C102	1-124-910-11	ELECT 47MF	20% 50V	C305	1-124-910-11	ELECT 47MF	20% 50V
C103	1-163-105-00	CERAMIC CHIP 33PF	5% 50V	C306	1-106-220-00	MYLAR 0.1MF	10% 100V
C104	1-164-665-11	CERAMIC CHIP 0.039MF	10% 50V	C307	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C105	1-164-665-11	CERAMIC CHIP 0.039MF	10% 50V	C308	1-124-910-11	ELECT 47MF	20% 50V
C106	1-163-031-11	CERAMIC CHIP 0.01MF	50V	C309	1-163-099-00	CERAMIC CHIP 18PF	5% 50V
C107	1-124-477-11	ELECT 47MF	20% 16V	C311	1-163-133-00	CERAMIC CHIP 470PF	5% 50V
C112	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C312	1-163-121-00	CERAMIC CHIP 150PF	5% 50V
C114	1-163-109-00	CERAMIC CHIP 47PF	5% 50V	C313	1-163-105-00	CERAMIC CHIP 33PF	5% 50V
C115	1-163-031-11	CERAMIC CHIP 0.01MF	50V	C314	1-163-103-00	CERAMIC CHIP 27PF	5% 50V
C120	1-163-173-00	CERAMIC CHIP 47PF	5% 50V	C316	1-163-377-11	CERAMIC CHIP 100PF	5% 50V
C123	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C317	1-163-093-00	CERAMIC CHIP 10PF	5% 50V
C125	1-124-917-11	ELECT 33MF	20% 50V	C318	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C128	1-163-025-11	CERAMIC CHIP 0.001MF	50V	C319	1-163-038-00	CERAMIC CHIP 0.1MF	25V

The components identified by shading and mark  $\Delta$  are critical for safety.  
Replace only with part number specified.

**KV-M1421D**  
RM-694


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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C321	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C516	1-163-113-00	CERAMIC CHIP 68PF	5% 50V
C323	1-163-055-00	CERAMIC CHIP 0.0047MF	10% 50V	C517	1-163-033-00	CERAMIC CHIP 0.022MF	50V
C329	1-131-367-00	TANTALUM 22MF	10% 16V	C520	1-163-033-00	CERAMIC CHIP 0.022MF	50V
C330	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C521	1-131-377-00	TANTALUM 10MF	10% 10V
C331	1-124-927-11	ELECT 4.7MF	20% 50V	C524	1-106-228-00	MYLAR 0.22MF	10% 100V
C332	1-130-783-00	MYLAR 0.33MF	10% 100V	C525	1-106-216-00	MYLAR 0.068MF	10% 100V
C333	1-163-037-11	CERAMIC CHIP 0.022MF	10% 25V	C526	1-124-910-11	ELECT 47MF	20% 50V
C334	1-163-063-00	CERAMIC CHIP 0.022MF	10% 50V	C527	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C335	1-163-063-00	CERAMIC CHIP 0.022MF	10% 50V	C529	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C336	1-163-119-00	CERAMIC CHIP 120PF	5% 50V	C530	1-163-197-00	CERAMIC CHIP 470PF	5% 50V
C337	1-130-834-00	MYLAR 1MF	10% 63V	C531	1-163-113-00	CERAMIC CHIP 68PF	5% 50V
C338	1-106-220-00	MYLAR 0.1MF	10% 100V	C532	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C339	1-106-220-00	MYLAR 0.1MF	10% 100V	C536	1-124-927-11	ELECT 4.7MF	20% 50V
C340	1-162-568-11	CERAMIC CHIP 0.33MF	10% 16V	C537	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C341	1-130-783-00	MYLAR 0.33MF	10% 100V	C540	1-163-111-00	CERAMIC CHIP 56PF	5% 50V
C343	1-106-383-00	MYLAR 0.047MF	10% 100V	C601	$\Delta$ 1-161-964-61	CERAMIC 0.0047MF	250V
C344	1-130-783-00	MYLAR 0.33MF	10% 100V	C602	$\Delta$ 1-161-964-61	CERAMIC 0.0047MF	250V
C345	1-163-187-00	CERAMIC CHIP 150PF	5% 50V	C603	1-162-599-12	CERAMIC 0.0047MF	250V
C346	1-163-033-00	CERAMIC CHIP 0.022MF	10% 25V	C604	1-125-318-00	ELECT(BLOCK) 220MF	20% 400V
C347	1-163-037-11	CERAMIC CHIP 0.022MF	10% 25V	C606	1-136-637-11	FILM 0.047MF	10% 630V
C348	1-163-037-11	CERAMIC CHIP 0.022MF	10% 25V	C607	1-106-367-00	MYLAR 0.01MF	10% 400V
C349	1-163-037-11	CERAMIC CHIP 0.022MF	10% 25V	C608	1-161-753-00	CERAMIC 470PF	10% 3KV
C352	1-106-375-12	MYLAR 0.322MF	10% 250V	C609	1-124-347-00	ELECT 100MF	20% 160V
C353	1-163-037-11	CERAMIC CHIP 0.022MF	10% 25V	C610	1-124-557-11	ELECT 1000MF	20% 25V
C354	1-163-037-11	CERAMIC CHIP 0.022MF	10% 25V	C612	1-102-228-00	CERAMIC 470PF	10% 500V
C355	1-163-037-11	CERAMIC CHIP 0.022MF	10% 25V	C614	1-126-101-11	ELECT 100MF	20% 16V
C356	1-163-237-11	CERAMIC CHIP 27PF	5% 50V	C616	$\Delta$ 1-164-246-11	CERAMIC 0.0022MF	20% 400V
C357	1-163-031-11	CERAMIC CHIP 0.01MF	50V	C618	1-126-233-11	ELECT 22MF	20% 50V
C358	1-124-556-11	ELECT 2200MF	20% 16V	C621	$\Delta$ 1-136-517-11	FILM 0.22MF	20% 300V
C359	1-163-125-00	CERAMIC CHIP 220PF	5% 50V	C623	$\Delta$ 1-164-246-11	CERAMIC 0.0022MF	20% 400V
C360	1-124-903-11	ELECT 1MF	20% 50V	C624	1-161-754-00	CERAMIC 0.001MF	10% 2KV
C361	1-163-237-11	CERAMIC CHIP 27PF	5% 50V	C625	$\Delta$ 1-136-517-11	FILM 0.22MF	20% 300V
C367	1-163-031-11	CERAMIC CHIP 0.01MF	50V	C626	$\Delta$ 1-163-161-91	CERAMIC CHIP 15PF	5% 50V
C370	1-126-233-11	ELECT 22MF	20% 50V	C627	$\Delta$ 1-163-161-91	CERAMIC CHIP 15PF	5% 50V
C388	1-106-220-00	MYLAR 0.1MF	10% 100V	C801	1-136-559-11	MYLAR 0.0047MF	10% 400V
C401	1-124-910-11	ELECT 47MF	20% 50V	C802	1-102-212-00	CERAMIC 820PF	10% 500V
C402	1-124-910-11	ELECT 47MF	20% 50V	C803	1-102-244-00	CERAMIC 220PF	10% 500V
C403	1-102-824-00	CERAMIC 470PF	5% 50V	C804	1-126-101-11	ELECT 100MF	20% 16V
C404	1-163-031-11	CERAMIC CHIP 0.01MF	50V	C805	$\Delta$ 1-136-076-11	FILM 0.0085MF	3% 2KV
C429	1-163-197-00	CERAMIC CHIP 470PF	10% 50V	C806	$\Delta$ 1-108-703-11	MYLAR 0.082MF	10% 200V
C430	1-130-783-00	MYLAR 0.33MF	10% 100V	C807	$\Delta$ 1-162-116-51	CERAMIC 680PF	10% 2KV
C431	1-124-910-11	ELECT 47MF	20% 50V	C808	1-136-932-11	FILM 0.82MF	5% 100V
C432	1-163-031-11	CERAMIC CHIP 0.01MF	50V	C809	1-106-367-00	MYLAR 0.01MF	10% 400V
C433	1-126-233-11	ELECT 22MF	20% 25V	C811	1-136-540-11	FILM 0.82MF	5% 160V
C434	1-163-031-11	CERAMIC CHIP 0.01MF	50V	C812	1-124-634-11	ELECT 1MF	20% 250V
C475	1-126-233-11	ELECT 22MF	20% 50V	C813	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
C476	1-106-216-00	MYLAR 0.068MF	10% 100V	C814	1-123-932-00	ELECT 4.7MF	20% 160V
C499	1-163-205-00	CERAMIC CHIP 0.001MF	10% 50V	C815	1-126-233-11	ELECT 22MF	20% 50V
C500	1-163-109-00	CERAMIC CHIP 47PF	5% 50V	C816	1-102-228-00	CERAMIC 470PF	10% 500V
C501	1-163-181-00	CERAMIC CHIP 100PF	5% 50V	C817	1-123-948-00	ELECT 22MF	20% 250V
C502	1-163-005-11	CERAMIC CHIP 470PF	10% 50V	C818	1-106-375-12	MYLAR 0.022MF	10% 250V
C503	1-163-181-00	CERAMIC CHIP 100PF	5% 50V	C819	1-162-114-00	CERAMIC 0.0047MF	2KV
C504	1-124-122-11	ELECT 100MF	20% 50V	C820	1-162-318-11	CERAMIC 0.001MF	10% 500V
C505	1-126-233-11	ELECT 22MF	20% 50V	C821	1-126-101-11	ELECT 100MF	20% 16V
C506	1-106-228-00	MYLAR 0.22MF	10% 100V	C822	1-162-318-11	CERAMIC 0.001MF	10% 500V
C507	1-124-557-11	ELECT 1000MF	20% 25V	C823	1-126-233-11	ELECT 22MF	20% 50V
C508	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C824	1-124-913-11	ELECT 470MF	20% 50V
C509	1-162-568-11	CERAMIC CHIP 0.33MF	10% 16V	C825	1-106-367-00	MYLAR 0.01MF	10% 400V
C510	1-163-081-00	CERAMIC CHIP 0.22MF	25V	C826	1-137-146-11	FILM 0.15MF	10% 250V
C511	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C840	1-124-902-00	ELECT 0.47MF	20% 50V
C512	1-106-216-00	MYLAR 0.068MF	10% 100V				
C513	1-124-927-11	ELECT 4.7MF	20% 50V				
C514	1-136-298-00	FILM 0.3033MF	5% 100V				
C515	1-163-035-00	CERAMIC CHIP 0.047MF	50V				

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The components identified by shading and mark **A** are critical for safety.  
Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
<FILTER>							
CD101	1-579-110-11	DISCRIMINATOR, CERAMIC		D604	8-719-979-85	DIODE EGP20G	
CF501	1-404-801-11	TRAP, CERAMIC		D605	8-719-300-33	DIODE RU-3AM	
SWF101	1-579-120-11	FILTER, SURFACE WAVE		D606	8-719-980-78	DIODE ERA83-006	
XF501	1-527-840-00	FILTER, CERAMIC		D607	8-719-300-33	DIODE RU-3AM	
				D608	8-719-300-33	DIODE RU-3AM	
<CONNECTOR>				D609	8-719-911-55	DIODE U05G	
CNA21	*1-560-290-00	PLUG, CONNECTOR (2.5MM PITCH)		D610	8-719-911-55	DIODE U05G	
CNA31	*1-568-881-51	PIN, CONNECTOR 6P		D611	8-719-303-49	DIODE R2M	
CNA42	*1-565-394-11	PIN, BOARD TO BOARD CONNECTOR		D801	8-719-945-80	DIODE ERC06-15S	
CNA43	*1-565-394-11	PIN, BOARD TO BOARD CONNECTOR		D802	8-719-979-85	DIODE EGP20G	
CNA61	*1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P		D803	8-719-300-33	DIODE RU-3AM	
CNA62	*1-566-664-11	PIN, CONNECTOR 4P		D805	8-719-300-33	DIODE RU-3AM	
CNA64	*1-508-784-00	PIN, CONNECTOR (5MM PITCH) 1P		D806	8-719-976-64	DIODE RGP02-17	
CNA81	*1-508-768-00	PIN, CONNECTOR (5MM PITCH) 6P		D807	8-719-300-33	DIODE RU-3AM	
CNA82	*1-568-536-11	PLUG (MINIATURE DY) 6P		D808	8-719-300-33	DIODE RU-3AM	
CNA83	*1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P		D810	8-719-911-55	DIODE U05G	
				D811	8-719-911-55	DIODE U05G	
				D820	8-719-911-19	DIODE 1SS119	
<TRIMMER>				<DELAY LINE>			
CT332	1-141-418-11	CAP, ADJ		DL301	1-236-062-11	MODULE, Y DELAY LINE	
<DIODE>				<FUSE>			
D002	8-719-920-55	DIODE SPR-54MVW		F601	<b>A</b> 1-576-231-21	FUSE (H.B.C.) 4A/250V	
	4-200-407-01	HOLDER, LED; D002			1-533-230-11	HOLDER, FUSE; F601	
D004	8-719-914-44	DIODE DAP202K		<IC>			
D007	8-719-400-18	DIODE MA152WK		IC001	8-759-062-07	IC PCA84C840P/016	
D008	8-719-105-82	DIODE RD5.1M-B2		IC002	8-759-043-86	IC ST24C02AB1	
D009	8-719-105-82	DIODE RD5.1M-B2		IC003	8-749-922-13	IC KEY-C00SV-F	
D011	8-719-912-20	DIODE 1SS120		IC004	8-759-805-37	IC L78LR05D-MA	
D015	8-719-911-19	DIODE 1SS119		IC005	8-759-157-40	IC UPC574J	
D020	8-719-911-19	DIODE 1SS119		IC102	8-759-044-41	IC TDA3827/V3	
D101	8-719-929-08	DIODE HZS7.5NB3		IC201	8-759-502-74	IC TDA7245	
D102	8-719-929-08	DIODE HZS7.5NB3		IC301	8-759-505-39	IC TDA4660V2	
D103	8-719-929-08	DIODE HZS7.5NB3		IC302	8-759-512-04	IC TDA3505-V1	
D104	8-719-400-18	DIODE MA152WK		IC331	8-759-521-22	IC TDA4650/V4	
D110	8-719-010-38	DIODE UZ-5.1BSB		IC501	8-759-113-05	IC UPC1488H	
D301	8-719-914-44	DIODE DAP202K			*4-389-343-01	SPRING; IC501	
D302	8-719-800-76	DIODE 1SS226		IC502	8-759-515-72	IC TDA8304	
D303	8-719-400-18	DIODE MA152WK		IC601	8-749-901-65	IC STR54041	
D305	8-719-800-76	DIODE 1SS226			*4-368-683-01	SPRING; IC601	
D306	8-719-400-18	DIODE MA152WK		IC801	8-759-945-58	IC RC4558P	
D313	8-719-800-76	DIODE 1SS226		IC802	8-759-604-39	IC M5F78M12L	
D321	8-719-109-89	DIODE RD5.6ES-B2			*4-389-343-01	SPRING; IC802	
D324	8-719-914-44	DIODE DAP202K		<JACK>			
D333	8-719-911-19	DIODE 1SS119		J201	1-562-837-11	JACK	
D402	8-719-109-96	DIODE HZS6.8NB1		J401	1-561-534-00	SOCKET 21P	
D403	8-719-109-96	DIODE HZS6.8NB1		J402	1-563-500-11	JACK BLOCK, PIN (L TYPE) 2P	
D404	8-719-109-96	DIODE HZS6.8NB1		<COIL>			
D405	8-719-929-12	DIODE HZS8.2NB3		L001	1-408-409-00	INDUCTOR 10UH	
D406	8-719-929-12	DIODE HZS8.2NB3		L102	1-408-409-00	INDUCTOR 10UH	
D410	8-719-109-96	DIODE HZS6.8NB1		L103	1-408-399-00	INDUCTOR 1.5UH	
D411	8-719-109-96	DIODE HZS6.8NB1		L105	1-410-872-21	INDUCTOR 10UH	
D417	8-719-914-44	DIODE DAP202K		L106	1-408-415-00	INDUCTOR 33UH	
D418	8-719-914-44	DIODE DAP202K		L107	1-408-410-00	INDUCTOR 12UH	
D426	8-719-109-96	DIODE HZS6.8NB1		L201	1-408-409-00	INDUCTOR 10UH	
D501	8-719-300-33	DIODE RU-3AM					
D503	8-719-911-19	DIODE 1SS119					
D504	8-719-400-18	DIODE MA152WK					
D519	8-719-400-18	DIODE MA152WK					
D601	<b>A</b> 8-719-946-90	DIODE KBU4JL-6088					
D602	8-719-976-64	DIODE RGP02-17					
D603	8-719-911-55	DIODE U05G					

The components identified by shading and mark  are critical for safety. Replace only with part number specified.


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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
L301	1-408-409-00	INDUCTOR 10UH		Q802	8-729-925-64	TRANSISTOR BU508AS2	
L302	1-408-419-00	INDUCTOR 68UH		Q803	8-729-202-03	TRANSISTOR 2SD1408-Y	
L303	1-408-425-00	INDUCTOR 220UH					
L331	1-404-554-11	COIL				<RESISTOR>	
L404	1-408-397-00	INDUCTOR 1UH		JR001	1-216-295-00	METAL GLAZE 0 5% 1/10W	
L405	1-408-409-00	INDUCTOR 10UH		JR002	1-216-295-00	METAL GLAZE 0 5% 1/10W	
L406	1-408-417-00	INDUCTOR 47UH		JR003	1-216-295-00	METAL GLAZE 0 5% 1/10W	
L501	1-404-493-31	COIL		JR004	1-216-295-00	METAL GLAZE 0 5% 1/10W	
L502	1-408-407-00	INDUCTOR 6.8UH		JR005	1-216-295-00	METAL GLAZE 0 5% 1/10W	
L506	1-408-411-00	INDUCTOR 15UH					
L801	1-407-365-00	COIL, CHOKER		JR006	1-216-295-00	METAL GLAZE 0 5% 1/10W	
L802	1-420-872-00	COIL, AIR CORE		JR008	1-216-295-00	METAL GLAZE 0 5% 1/10W	
L804	1-459-856-11	COIL, FERRITE		JR009	1-216-295-00	METAL GLAZE 0 5% 1/10W	
L805	1-408-236-00	INDUCTOR 2.7MMH		JR010	1-216-295-00	METAL GLAZE 0 5% 1/10W	
L806	1-459-756-12	COIL, HORIZONTAL LINEARITY		JR011	1-216-295-00	METAL GLAZE 0 5% 1/10W	
L807	1-410-067-21	INDUCTOR 4.7MMH		JR012	1-216-295-00	METAL GLAZE 0 5% 1/10W	
L808	1-408-226-00	INDUCTOR 82UH		JR015	1-216-295-00	METAL GLAZE 0 5% 1/10W	
L809	1-407-504-00	INDUCTOR 10MMH		JR016	1-216-295-00	METAL GLAZE 0 5% 1/10W	
		<VARIABLE COIL>		JR017	1-216-295-00	METAL GLAZE 0 5% 1/10W	
LV301	1-404-554-11	COIL		JR018	1-216-295-00	METAL GLAZE 0 5% 1/10W	
		<IC LINK>		JR019	1-216-295-00	METAL GLAZE 0 5% 1/10W	
PS801	1-532-679-91	LINK, IC (ICP-N15) 0.6A		JR020	1-216-295-00	METAL GLAZE 0 5% 1/10W	
		<TRANSISTOR>		JR021	1-216-295-00	METAL GLAZE 0 5% 1/10W	
Q001	8-729-230-49	TRANSISTOR 2SC2712-YG		JR022	1-216-295-00	METAL GLAZE 0 5% 1/10W	
Q003	8-729-901-01	TRANSISTOR DTC144EK		JR024	1-216-295-00	METAL GLAZE 0 5% 1/10W	
Q004	8-729-230-49	TRANSISTOR 2SC2712-YG		JR026	1-216-295-00	METAL GLAZE 0 5% 1/10W	
Q005	8-729-923-54	TRANSISTOR DTA143TK		JR028	1-216-295-00	METAL GLAZE 0 5% 1/10W	
Q006	8-729-922-66	TRANSISTOR 2SC2410SN		JR029	1-216-295-00	METAL GLAZE 0 5% 1/10W	
Q007	8-729-230-49	TRANSISTOR 2SC2712-YG		JR030	1-216-295-00	METAL GLAZE 0 5% 1/10W	
Q009	8-729-901-01	TRANSISTOR DTC144EK		JR034	1-216-295-00	METAL GLAZE 0 5% 1/10W	
Q015	8-729-230-49	TRANSISTOR 2SC2712-YG		JR035	1-216-295-00	METAL GLAZE 0 5% 1/10W	
Q016	8-729-901-47	TRANSISTOR DTA143EK		JR036	1-216-295-00	METAL GLAZE 0 5% 1/10W	
Q017	8-729-216-22	TRANSISTOR 2SA1162-G		JR037	1-216-295-00	METAL GLAZE 0 5% 1/10W	
Q019	8-729-901-06	TRANSISTOR DTA144EK		JR038	1-216-295-00	METAL GLAZE 0 5% 1/10W	
Q020	8-729-901-00	TRANSISTOR DTC124EK		JR039	1-216-295-00	METAL GLAZE 0 5% 1/10W	
Q101	8-729-901-47	TRANSISTOR DTA143EK		JR040	1-216-295-00	METAL GLAZE 0 5% 1/10W	
Q102	8-729-901-47	TRANSISTOR DTA143EK		JR041	1-216-295-00	METAL GLAZE 0 5% 1/10W	
Q103	8-729-901-47	TRANSISTOR DTA143EK		JR045	1-216-295-00	METAL GLAZE 0 5% 1/10W	
Q104	8-729-230-49	TRANSISTOR 2SC2712-YG		JR050	1-216-295-00	METAL GLAZE 0 5% 1/10W	
Q106	8-729-230-49	TRANSISTOR 2SC2712-YG		JR060	1-216-295-00	METAL GLAZE 0 5% 1/10W	
Q107	8-729-216-22	TRANSISTOR 2SA1162-G		JR099	1-216-295-00	METAL GLAZE 0 5% 1/10W	
Q112	8-729-230-49	TRANSISTOR 2SC2712-YG		JR101	1-216-296-00	METAL GLAZE 0 5% 1/8W	
Q114	8-729-901-00	TRANSISTOR DTC124EK		JR102	1-216-296-00	METAL GLAZE 0 5% 1/8W	
Q115	8-729-901-00	TRANSISTOR DTC124EK		JR103	1-216-296-00	METAL GLAZE 0 5% 1/8W	
Q141	8-729-014-99	TRANSISTOR BF959-AMMO		JR104	1-216-296-00	METAL GLAZE 0 5% 1/8W	
Q302	8-729-230-49	TRANSISTOR 2SC2712-YG		JR105	1-216-296-00	METAL GLAZE 0 5% 1/8W	
Q303	8-729-230-49	TRANSISTOR 2SC2712-YG		JR106	1-216-296-00	METAL GLAZE 0 5% 1/8W	
Q304	8-729-230-49	TRANSISTOR 2SC2712-YG		JR107	1-216-296-00	METAL GLAZE 0 5% 1/8W	
Q305	8-729-230-49	TRANSISTOR 2SC2712-YG		JR108	1-216-296-00	METAL GLAZE 0 5% 1/8W	
Q307	8-729-216-22	TRANSISTOR 2SA1162-G		JR109	1-216-296-00	METAL GLAZE 0 5% 1/8W	
Q310	8-729-230-49	TRANSISTOR 2SC2712-YG		JR110	1-216-296-00	METAL GLAZE 0 5% 1/8W	
Q311	8-729-216-22	TRANSISTOR 2SA1162-G		JR111	1-216-296-00	METAL GLAZE 0 5% 1/8W	
Q401	8-729-230-49	TRANSISTOR 2SC2712-YG		JR112	1-216-296-00	METAL GLAZE 0 5% 1/8W	
Q457	8-729-216-22	TRANSISTOR 2SA1162-G		JR116	1-216-296-00	METAL GLAZE 0 5% 1/8W	
Q504	8-729-230-49	TRANSISTOR 2SC2712-YG		JR117	1-216-296-00	METAL GLAZE 0 5% 1/8W	
Q505	8-729-216-22	TRANSISTOR 2SA1162-G		JR118	1-216-296-00	METAL GLAZE 0 5% 1/8W	
Q601	8-729-906-74	TRANSISTOR BC637-16		JR119	1-216-296-00	METAL GLAZE 0 5% 1/8W	
Q801	8-729-119-80	TRANSISTOR 2SC2688-LK		JR123	1-216-296-00	METAL GLAZE 0 5% 1/8W	
				JR125	1-216-296-00	METAL GLAZE 0 5% 1/8W	
				JR126	1-216-296-00	METAL GLAZE 0 5% 1/8W	
				JR127	1-216-296-00	METAL GLAZE 0 5% 1/8W	
				JR128	1-216-296-00	METAL GLAZE 0 5% 1/8W	
				JR129	1-216-296-00	METAL GLAZE 0 5% 1/8W	


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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
JR130	1-216-296-00	METAL GLAZE	0 5% 1/8W	R047	1-216-079-00	METAL GLAZE	18K 5% 1/10W
JR131	1-216-296-00	METAL GLAZE	0 5% 1/8W	R048	1-216-202-00	METAL GLAZE	1.5K 5% 1/8W
JR133	1-216-296-00	METAL GLAZE	0 5% 1/8W	R049	1-216-073-00	METAL GLAZE	10K 5% 1/10W
JR134	1-216-296-00	METAL GLAZE	0 5% 1/8W	R050	1-216-250-00	METAL GLAZE	150K 5% 1/8W
JR135	1-216-296-00	METAL GLAZE	0 5% 1/8W	R051	1-216-295-00	METAL GLAZE	0 5% 1/10W
JR136	1-216-296-00	METAL GLAZE	0 5% 1/8W	R052	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
JR137	1-216-296-00	METAL GLAZE	0 5% 1/8W	R053	1-216-049-00	METAL GLAZE	1K 5% 1/10W
JR139	1-216-296-00	METAL GLAZE	0 5% 1/8W	R054	1-249-395-11	CARBON	15 5% 1/4W
JR141	1-216-296-00	METAL GLAZE	0 5% 1/8W	R055	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
JR144	1-216-296-00	METAL GLAZE	0 5% 1/8W	R056	1-216-041-00	METAL GLAZE	470 5% 1/10W
JR146	1-216-296-00	METAL GLAZE	0 5% 1/8W	R058	1-249-434-11	CARBON	27K 5% 1/4W
JR147	1-216-296-00	METAL GLAZE	0 5% 1/8W	R059	1-216-089-00	METAL GLAZE	47K 5% 1/10W
JR148	1-216-296-00	METAL GLAZE	0 5% 1/8W	R060	1-216-234-00	METAL GLAZE	33K 5% 1/8W
JR149	1-216-296-00	METAL GLAZE	0 5% 1/8W	R061	1-216-079-00	METAL GLAZE	18K 5% 1/10W
JR150	1-216-296-00	METAL GLAZE	0 5% 1/8W	R062	1-216-242-00	METAL GLAZE	68K 5% 1/8W
JR154	1-216-296-00	METAL GLAZE	0 5% 1/8W	R064	1-216-091-00	METAL GLAZE	56K 5% 1/10W
JR155	1-216-296-00	METAL GLAZE	0 5% 1/8W	R075	1-216-240-00	METAL GLAZE	56K 5% 1/8W
JR182	1-216-296-00	METAL GLAZE	0 5% 1/8W	R076	1-216-198-00	METAL GLAZE	1K 5% 1/8W
JR183	1-216-296-00	METAL GLAZE	0 5% 1/8W	R077	1-216-077-00	METAL GLAZE	15K 5% 1/10W
JR184	1-216-296-00	METAL GLAZE	0 5% 1/8W	R078	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R001	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W	R079	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R002	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R081	1-216-198-00	METAL GLAZE	1K 5% 1/8W
R003	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R082	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R004	1-216-083-00	METAL GLAZE	27K 5% 1/10W	R083	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R005	1-216-206-00	METAL GLAZE	2.2K 5% 1/8W	R084	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R006	1-216-246-00	METAL GLAZE	100K 5% 1/8W	R087	1-216-027-00	METAL GLAZE	120 5% 1/10W
R007	1-216-190-00	METAL GLAZE	470 5% 1/8W	R094	1-216-077-00	METAL GLAZE	15K 5% 1/10W
R008	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R095	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R009	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R096	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R010	1-216-198-00	METAL GLAZE	1K 5% 1/8W	R097	1-216-085-00	METAL GLAZE	33K 5% 1/10W
R011	1-216-035-00	METAL GLAZE	270 5% 1/10W	R099	1-216-228-00	METAL GLAZE	18K 5% 1/8W
R012	1-216-240-00	METAL GLAZE	56K 5% 1/8W	R100	1-216-017-00	METAL GLAZE	47 5% 1/10W
R013	1-216-077-00	METAL GLAZE	15K 5% 1/10W	R101	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W
R014	1-216-748-11	METAL GLAZE	39K 5% 1/10W	R102	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W
R015	1-216-230-00	METAL GLAZE	22K 5% 1/8W	R103	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R016	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R104	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R017	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R105	1-216-109-00	METAL GLAZE	330K 5% 1/10W
R018	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R106	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R019	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R107	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R020	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R108	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R021	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R109	1-216-190-00	METAL GLAZE	470 5% 1/8W
R022	1-216-198-00	METAL GLAZE	1K 5% 1/8W	R110	1-249-437-11	CARBON	47K 5% 1/4W
R023	1-216-051-00	METAL GLAZE	1.2K 5% 1/10W	R111	1-216-085-00	METAL GLAZE	33K 5% 1/10W
R024	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R112	1-249-411-11	CARBON	330 5% 1/4W
R025	1-216-097-00	METAL GLAZE	100K 5% 1/10W	R113	1-216-085-00	METAL GLAZE	33K 5% 1/10W
R026	1-216-089-00	METAL GLAZE	47K 5% 1/10W	R114	1-216-238-00	METAL GLAZE	47K 5% 1/8W
R028	1-216-085-00	METAL GLAZE	33K 5% 1/10W	R115	1-216-045-00	METAL GLAZE	680 5% 1/10W
R029	1-216-041-00	METAL GLAZE	470 5% 1/10W	R116	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R030	1-216-077-00	METAL GLAZE	15K 5% 1/10W	R118	1-216-035-00	METAL GLAZE	270 5% 1/10W
R031	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R119	1-216-045-00	METAL GLAZE	680 5% 1/10W
R032	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R130	1-249-409-11	CARBON	220 5% 1/4W
R033	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R131	1-216-041-00	METAL GLAZE	470 5% 1/10W
R034	1-216-238-00	METAL GLAZE	47K 5% 1/8W	R132	1-216-295-00	METAL GLAZE	0 5% 1/10W
R035	1-216-077-00	METAL GLAZE	15K 5% 1/10W	R136	1-216-041-00	METAL GLAZE	470 5% 1/10W
R037	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R138	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R038	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R139	1-216-295-00	METAL GLAZE	0 5% 1/10W
R039	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R140	1-216-037-00	METAL GLAZE	330 5% 1/10W
R040	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R141	1-216-021-00	METAL GLAZE	68 5% 1/10W
R041	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R142	1-216-063-00	METAL GLAZE	3.9K 5% 1/10W
R042	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R143	1-216-033-00	METAL GLAZE	220 5% 1/10W
R043	1-215-900-11	METAL OXIDE	22K 5% 2W	R144	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R044	1-216-105-00	METAL GLAZE	220K 5% 1/10W	R147	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R045	1-216-089-00	METAL GLAZE	47K 5% 1/10W	R148	1-216-017-00	METAL GLAZE	47 5% 1/10W
R046	1-216-081-00	METAL GLAZE	22K 5% 1/10W				

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R149	1-216-182-00	METAL GLAZE	220 5% 1/8W	R402	1-216-172-00	METAL GLAZE	82 5% 1/8W
R151	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R403	1-216-023-00	METAL GLAZE	82 5% 1/10W
R152	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W	R404	1-216-023-00	METAL GLAZE	82 5% 1/10W
R153	1-215-867-00	METAL OXIDE	470 5% 1W	R405	1-216-023-00	METAL GLAZE	82 5% 1/10W
R199	1-216-295-00	METAL GLAZE	0 5% 1/10W	R406	1-216-226-00	METAL GLAZE	15K 5% 1/8W
R201	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R407	1-216-226-00	METAL GLAZE	15K 5% 1/8W
R202	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R408	1-216-091-00	METAL GLAZE	56K 5% 1/10W
R203	1-216-298-00	METAL GLAZE	2.2 5% 1/10W	R409	1-216-023-00	METAL GLAZE	82 5% 1/10W
R204	1-247-741-11	CARBON	150 5% 1/2W	R411	1-216-037-00	METAL GLAZE	330 5% 1/10W
R205	1-216-083-00	METAL GLAZE	27K 5% 1/10W	R412	1-216-037-00	METAL GLAZE	330 5% 1/10W
R206	1-216-035-00	METAL GLAZE	270 5% 1/10W	R413	1-216-037-00	METAL GLAZE	330 5% 1/10W
R207	1-216-298-00	METAL GLAZE	2.2 5% 1/10W	R414	1-216-041-00	METAL GLAZE	470 5% 1/10W
R303	1-216-033-00	METAL GLAZE	220 5% 1/10W	R420	1-216-182-00	METAL GLAZE	220 5% 1/8W
R304	1-216-033-00	METAL GLAZE	220 5% 1/10W	R421	1-216-449-11	METAL OXIDE	56 5% 2W
R305	1-216-033-00	METAL GLAZE	220 5% 1/10W	R423	1-216-095-00	METAL GLAZE	82K 5% 1/10W
R306	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W	R424	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R307	1-216-077-00	METAL GLAZE	15K 5% 1/10W	R425	1-216-033-00	METAL GLAZE	220 5% 1/10W
R308	1-216-033-00	METAL GLAZE	220 5% 1/10W	R426	1-216-045-00	METAL GLAZE	680 5% 1/10W
R309	1-216-055-00	METAL GLAZE	1.8K 5% 1/10W	R427	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R310	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R428	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R311	1-216-051-00	METAL GLAZE	1.2K 5% 1/10W	R430	1-216-077-00	METAL GLAZE	15K 5% 1/10W
R312	1-216-182-00	METAL GLAZE	220 5% 1/8W	R431	1-216-077-00	METAL GLAZE	15K 5% 1/10W
R313	1-216-182-00	METAL GLAZE	220 5% 1/8W	R432	1-249-403-11	CARBON	68 5% 1/4W
R314	1-216-033-00	METAL GLAZE	220 5% 1/10W	R433	1-216-079-00	METAL GLAZE	18K 5% 1/10W
R315	1-216-047-00	METAL GLAZE	820 5% 1/10W	R434	1-216-029-00	METAL GLAZE	150 5% 1/10W
R316	1-216-089-00	METAL GLAZE	47K 5% 1/10W	R435	1-216-033-00	METAL GLAZE	220 5% 1/10W
R317	1-216-202-00	METAL GLAZE	1.5K 5% 1/8W	R436	1-216-089-00	METAL GLAZE	47K 5% 1/10W
R320	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R437	1-216-085-00	METAL GLAZE	33K 5% 1/10W
R321	1-216-023-00	METAL GLAZE	82 5% 1/10W	R501	1-216-214-00	METAL GLAZE	4.7K 5% 1/8W
R322	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W	R502	1-247-743-11	CARBON	220 5% 1/2W
R323	1-216-192-00	METAL GLAZE	560 5% 1/8W	R503	1-249-437-11	CARBON	47K 5% 1/4W
R324	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R504	1-216-017-00	METAL GLAZE	47 5% 1/10W
R325	1-249-410-11	CARBON	270 5% 1/4W	R505	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R326	1-216-035-00	METAL GLAZE	270 5% 1/10W	R507	1-216-350-11	METAL OXIDE	1.2 5% 1W
R327	1-216-121-00	METAL GLAZE	1M 5% 1/10W	R508	1-215-867-00	METAL OXIDE	470 5% 1W
R328	1-216-001-00	METAL GLAZE	10 5% 1/10W	R510	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W
R329	1-216-109-00	METAL GLAZE	330K 5% 1/10W	R511	1-216-244-00	METAL GLAZE	82K 5% 1/8W
R330	1-216-244-00	METAL GLAZE	82K 5% 1/8W	R512	1-216-089-00	METAL GLAZE	47K 5% 1/10W
R331	1-216-113-00	METAL GLAZE	470K 5% 1/10W	R513	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W
R332	1-216-270-00	METAL GLAZE	1M 5% 1/8W	R514	1-216-051-00	METAL GLAZE	1.2K 5% 1/10W
R333	1-216-091-00	METAL GLAZE	56K 5% 1/10W	R515	1-216-683-11	METAL CHIP	22K 0.50% 1/10W
R334	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W	R516	1-216-095-00	METAL GLAZE	82K 5% 1/10W
R335	1-216-001-00	METAL GLAZE	10 5% 1/10W	R517	1-216-031-00	METAL GLAZE	180 5% 1/10W
R336	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W	R518	1-216-033-00	METAL GLAZE	220 5% 1/10W
R337	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R519	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R338	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R520	1-216-258-00	METAL GLAZE	330K 5% 1/8W
R341	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W	R521	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W
R342	1-216-041-00	METAL GLAZE	470 5% 1/10W	R522	1-215-863-11	METAL OXIDE	100 5% 1W
R346	1-216-037-00	METAL GLAZE	330 5% 1/10W	R523	1-247-754-11	CARBON	1.5K 5% 1/2W
R347	1-216-089-00	METAL GLAZE	47K 5% 1/10W	R524	1-216-099-00	METAL GLAZE	120K 5% 1/10W
R348	1-216-033-00	METAL GLAZE	220 5% 1/10W	R525	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R349	1-216-029-00	METAL GLAZE	150 5% 1/10W	R527	1-215-869-11	METAL OXIDE	1K 5% 1W
R350	1-216-041-00	METAL GLAZE	470 5% 1/10W	R532	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R351	1-216-043-00	METAL GLAZE	560 5% 1/10W	R533	1-216-133-00	METAL GLAZE	3.3M 5% 1/10W
R352	1-216-039-00	METAL GLAZE	390 5% 1/10W	R534	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W
R353	1-249-438-11	CARBON	56K 5% 1/4W	R535	1-216-107-00	METAL GLAZE	270K 5% 1/10W
R354	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R539	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R355	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R542	1-216-025-00	METAL GLAZE	100 5% 1/10W
R356	1-216-041-00	METAL GLAZE	470 5% 1/10W	R543	1-249-408-11	CARBON	180 5% 1/4W
R357	1-216-039-00	METAL GLAZE	390 5% 1/10W	R545	1-216-278-00	METAL GLAZE	2.2M 5% 1/8W
R360	1-216-001-00	METAL GLAZE	10 5% 1/10W	R548	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R363	1-216-222-00	METAL GLAZE	10K 5% 1/8W	R601 	1-205-909-11	WIREWOUND	3.3 5% 10W
R364	1-216-222-00	METAL GLAZE	10K 5% 1/8W	R602	1-214-923-00	CARBON	270K 5% 1/2W
R399	1-216-037-00	METAL GLAZE	330 5% 1/10W				

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The components identified by shading and mark  $\Delta$  are critical for safety.  
Replace only with part number specified.

KV-M1421D  
RM-694

C

V

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
D711	8-719-800-76	DIODE ISS226		*A-1645-017-A	V BOARD, COMPLETE		
D712	8-719-800-76	DIODE ISS226		*****			
<JACK>				<CAPACITOR>			
J901	1-526-819-11	SOCKET, PICTURE TUBE		C1	1-126-101-11	ELECT 100MF	20% 16V
<TRANSISTOR>				C2	1-163-038-00	CERAMIC CHIP 0.1MF	25V
Q701	8-729-230-49	TRANSISTOR 2SC2712-YG		C3	1-124-120-11	ELECT 220MF	20% 16V
Q702	8-729-230-49	TRANSISTOR 2SC2712-YG		C4	1-163-077-00	CERAMIC CHIP 0.1MF	50V
Q703	8-729-230-49	TRANSISTOR 2SC2712-YG		C5	1-124-120-11	ELECT 220MF	20% 16V
Q704	8-729-906-70	TRANSISTOR BF871		C6	1-163-038-00	CERAMIC CHIP 0.1MF	25V
Q705	8-729-906-70	TRANSISTOR BF871		C7	1-163-235-11	CERAMIC CHIP 22PF	5% 50V
Q706	8-729-906-70	TRANSISTOR BF871		C8	1-163-235-11	CERAMIC CHIP 22PF	5% 50V
Q707	8-729-200-17	TRANSISTOR 2SA1091-0		C9	1-163-235-11	CERAMIC CHIP 22PF	5% 50V
Q708	8-729-200-17	TRANSISTOR 2SA1091-0		C10	1-163-038-00	CERAMIC CHIP 0.1MF	25V
Q709	8-729-200-17	TRANSISTOR 2SA1091-0		C11	1-163-038-00	CERAMIC CHIP 0.1MF	25V
<RESISTOR>				C12	1-163-038-00	CERAMIC CHIP 0.1MF	25V
JW121	1-216-296-00	METAL GLAZE 0 5% 1/8W		C13	1-163-038-00	CERAMIC CHIP 0.1MF	25V
R701	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W		C14	1-124-927-11	ELECT 4.7MF	20% 50V
R702	1-216-210-00	METAL GLAZE 3.3K 5% 1/8W		C16	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
R703	1-216-045-00	METAL GLAZE 680 5% 1/10W		C17	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
R704	1-216-045-00	METAL GLAZE 680 5% 1/10W		C23	1-124-927-11	ELECT 4.7MF	20% 50V
R705	1-216-017-00	METAL GLAZE 47 5% 1/10W		C26	1-163-038-00	CERAMIC CHIP 0.1MF	25V
R706	1-216-017-00	METAL GLAZE 47 5% 1/10W		C27	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
R707	1-216-017-00	METAL GLAZE 47 5% 1/10W		C28	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
R708	1-216-198-00	METAL GLAZE 1K 5% 1/8W		C29	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
R709	1-216-196-00	METAL GLAZE 820 5% 1/8W		C32	1-163-038-00	CERAMIC CHIP 0.1MF	25V
R710	1-249-413-11	CARBON 470 5% 1/4W		C33	1-163-038-00	CERAMIC CHIP 0.1MF	25V
R711	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W		<CONNECTOR>			
R712	1-247-893-11	CARBON 390K 5% 1/4W		CNV1	*1-565-393-11	CONNECTOR, BOARD TO BOARD	
R713	1-247-883-00	CARBON 150K 5% 1/4W		CNV2	*1-565-393-11	CONNECTOR, BOARD TO BOARD	
R714	1-216-198-00	METAL GLAZE 1K 5% 1/8W		<DIODE>			
R715	1-216-198-00	METAL GLAZE 1K 5% 1/8W		D1	8-719-105-91	DIODE RD5.6M-B2	
R716	1-216-049-00	METAL GLAZE 1K 5% 1/10W		D3	8-719-914-44	DIODE DAP202K	
R717	1-202-824-00	SOLID 3.3K 10% 1/2W		D5	8-719-914-44	DIODE DAP202K	
R718	1-202-824-00	SOLID 3.3K 10% 1/2W		D6	8-719-400-18	DIODE MA152WK	
R719	1-202-824-00	SOLID 3.3K 10% 1/2W		D9	8-719-106-17	DIODE RD6.8M-B2	
R720	1-216-463-00	METAL OXIDE 12K 5% 2W		<IC>			
R721	1-216-463-00	METAL OXIDE 12K 5% 2W		IC2	8-759-045-54	IC SAA5246P/E/M4A	
R722	1-216-463-00	METAL OXIDE 12K 5% 2W		IC3	8-759-510-49	IC FCB61C65L-70P	
R723	1-249-398-11	CARBON 27 5% 1/4W	F	<COIL>			
R726	1-202-719-00	SOLID 1M 10% 1/2W		L1	1-408-403-00	INDUCTOR 3.3UH	
R727	1-202-838-00	SOLID 100K 10% 1/2W		L2	1-408-407-00	INDUCTOR 6.8UH	
R728	1-202-842-11	SOLID 220K 10% 1/2W		L3	1-408-407-00	INDUCTOR 6.8UH	
R729	1-216-349-00	METAL OXIDE 1 5% 1W	F	L4	1-408-407-00	INDUCTOR 6.8UH	
R731	1-202-719-00	SOLID 1M 10% 1/2W		<IC LINK>			
R732	1-216-262-00	METAL GLAZE 470K 5% 1/8W		PS1	$\Delta$ 1-532-679-91	LINK, IC (ICP-N15) 0.6A	
R734	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W		<TRANSISTOR>			
R735	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W		Q1	8-729-900-53	TRANSISTOR DTC114EK	
R736	1-249-421-11	CARBON 2.2K 5% 1/4W		Q2	8-729-920-92	TRANSISTOR 2SD2096-EF	
<VARIABLE RESISTOR>				Q3	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
RV701	1-237-749-11	RES, ADJ, CARBON 2200		Q4	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
RV702	1-237-749-11	RES, ADJ, CARBON 2200		Q5	8-729-807-87	TRANSISTOR 2SB1295-UL6	
RV703	1-230-641-11	RES, ADJ, METAL GLAZE 2.2M					
RV704	1-230-641-11	RES, ADJ, METAL GLAZE 2.2M					
RV705	1-230-798-11	RES, ADJ, METAL GLAZE 90M					
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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
Q6	8-729-807-87	TRANSISTOR 2SB1295-UL6				MISCELLANEOUS	
Q7	8-729-807-87	TRANSISTOR 2SB1295-UL6				*****	
Q9	8-729-901-04	TRANSISTOR DTA114EK					
Q10	8-729-901-01	TRANSISTOR DTC144EK					
Q11	8-729-901-01	TRANSISTOR DTC144EK					
		<RESISTOR>					
JR01	1-216-295-00	METAL GLAZE 0 5% 1/10W					
JR02	1-216-295-00	METAL GLAZE 0 5% 1/10W					
JR03	1-216-295-00	METAL GLAZE 0 5% 1/10W					
JR08	1-216-295-00	METAL GLAZE 0 5% 1/10W					
JR09	1-216-295-00	METAL GLAZE 0 5% 1/10W					
JR11	1-216-295-00	METAL GLAZE 0 5% 1/10W					
JR14	1-216-296-00	METAL GLAZE 0 5% 1/8W					
JR15	1-216-296-00	METAL GLAZE 0 5% 1/8W					
JR17	1-216-295-00	METAL GLAZE 0 5% 1/10W					
JR18	1-216-296-00	METAL GLAZE 0 5% 1/8W					
JR19	1-216-296-00	METAL GLAZE 0 5% 1/8W					
JR20	1-216-296-00	METAL GLAZE 0 5% 1/8W					
JR21	1-216-296-00	METAL GLAZE 0 5% 1/8W					
JR23	1-216-295-00	METAL GLAZE 0 5% 1/10W					
JR24	1-216-296-00	METAL GLAZE 0 5% 1/8W					
JR25	1-216-296-00	METAL GLAZE 0 5% 1/8W					
JR26	1-216-296-00	METAL GLAZE 0 5% 1/8W					
JR202	1-216-295-00	METAL GLAZE 0 5% 1/10W					
JR203	1-216-295-00	METAL GLAZE 0 5% 1/10W					
JR221	1-216-295-00	METAL GLAZE 0 5% 1/10W					
JR222	1-216-295-00	METAL GLAZE 0 5% 1/10W					
R1	1-218-326-11	METAL GLAZE 470 5% 1/2W					
R2	1-216-214-00	METAL GLAZE 4.7K 5% 1/8W					
R3	1-216-049-00	METAL GLAZE 1K 5% 1/10W					
R4	1-216-025-00	METAL GLAZE 100 5% 1/10W					
R5	1-216-047-00	METAL GLAZE 820 5% 1/10W					
R6	1-216-001-00	METAL GLAZE 10 5% 1/10W					
R7	1-216-083-00	METAL GLAZE 27K 5% 1/10W					
R8	1-216-071-00	METAL GLAZE 8.2K 5% 1/10W					
R9	1-216-308-00	METAL GLAZE 4.7 5% 1/10W					
R10	1-218-325-11	METAL GLAZE 120 5% 1/4W					
R11	1-218-325-11	METAL GLAZE 120 5% 1/4W					
R12	1-218-325-11	METAL GLAZE 120 5% 1/4W					
R13	1-216-025-00	METAL GLAZE 100 5% 1/10W					
R14	1-216-001-00	METAL GLAZE 10 5% 1/10W					
R15	1-216-013-00	METAL GLAZE 33 5% 1/10W					
R16	1-216-013-00	METAL GLAZE 33 5% 1/10W					
R17	1-216-013-00	METAL GLAZE 33 5% 1/10W					
R18	1-216-025-00	METAL GLAZE 100 5% 1/10W					
R19	1-216-025-00	METAL GLAZE 100 5% 1/10W					
R21	1-216-013-00	METAL GLAZE 33 5% 1/10W					
R22	1-216-168-00	METAL GLAZE 56 5% 1/8W					
R23	1-216-214-00	METAL GLAZE 4.7K 5% 1/8W					
R40	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W					
R42	1-216-049-00	METAL GLAZE 1K 5% 1/10W					
R49	1-216-049-00	METAL GLAZE 1K 5% 1/10W					
R50	1-216-296-00	METAL GLAZE 0 5% 1/8W					
		<VARIABLE RESISTOR>					
RV1	1-238-012-11	RES, ADJ, CARBON 1K					
		<CRYSTAL>					
X1	1-579-266-31	CRYSTAL VIBRATOR					

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